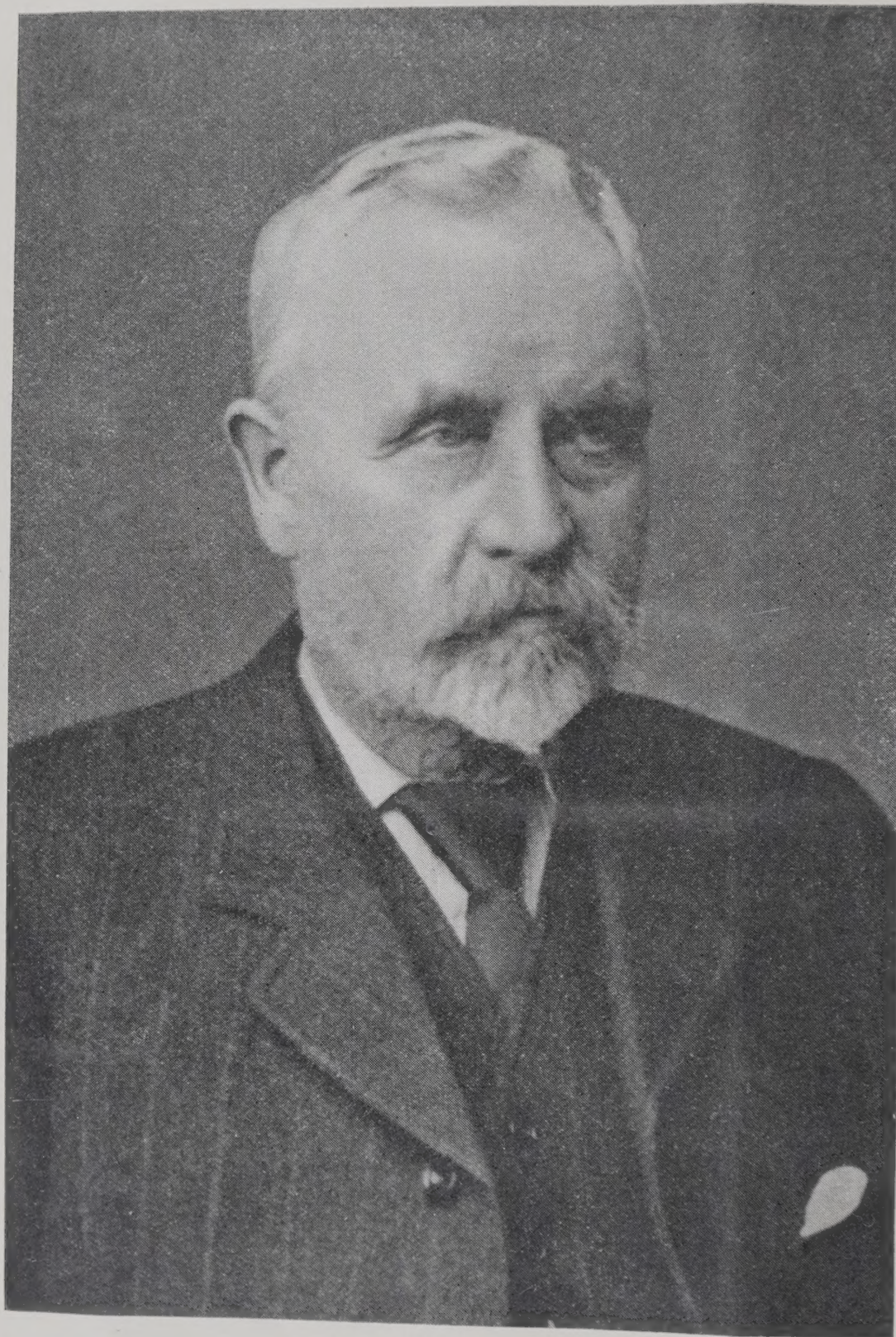


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HENRY MERRYWEATHER, J.P.



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THIS VOLUME OF "THE GARDEN"

Is dedicated to

HENRY MERRYWEATHER, J.P.

IT is with considerable pleasure that we dedicate this, the seventy-eighth volume of THE GARDEN, to Mr. Henry Merryweather, who has devoted a long and strenuous life to horticulture. He was born as long ago as January 24, 1839. The son of a gentleman's gardener, he spent his earliest days in private gardens, but at the age of sixteen joined his father in a nursery business which laid the foundation of the now well-known firm of Messrs. H. Merryweather and Sons, Limited., Southwell, Notts. Early in his career, *i.e.*, in the year 1858, about the time the first Rose Show was held in St. James's Hall, he made the acquaintance of the late Dean Hole, who was at that time hon. secretary of the Rose Show, and that commenced a friendship which became very intimate, and was only severed by the death of the venerable Dean. Mr. Merryweather recalls with interest a visit paid by Mr. William Robinson (who founded THE GARDEN), Mr. Noel Humphreys and the late Dean to his nurseries at Southwell, when Mr. Humphreys took away with him a very fine bloom of Rose Maréchal Niel and wrote a diary of the flower in THE GARDEN somewhere about the early sixties. One of the most important events of his life was the introduction of Apple Bramley's Seedling, which was raised in a garden at Southwell. Mr. Merryweather at once realised the value of this splendid culinary Apple, and secured the whole stock. When he first exhibited fruits before the Royal Horticultural Society in 1876, this variety received an award of merit, and subsequently, in 1883, it received the higher recognition of a first-class certificate. The cultivation and improvement of the Rose have always received considerable attention from our friend, and it is to his enterprise that we owe the beautiful Polyantha varieties Jessie and Phyllis. Although horticulture has naturally been his first love, local affairs have received considerable attention, and there is scarcely an organisation in and around Southwell that has not benefited by his presence. Two years ago he was appointed a county magistrate, a position that he fills with credit to himself and the county he represents. In spite of his advancing years, Mr. Merryweather enjoys good health and is as active as many men are at fifty. That he may long be spared to carry on his good work is our earnest wish, in which we feel sure all who have the honour to know him will heartily join.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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NOTES OF THE WEEK.

To Our Readers.—With this issue a new volume of **THE GARDEN** and a new year commence. It is with pleasure that we look back upon the year that has closed and recall the good feeling that continues to exist between Editor and readers. To those who have assisted us in making **THE GARDEN** better known, and those who have so kindly sent us notes and photographs of interest, we tender our best thanks. We fully realise that with this assistance we are enabled to maintain that high standard which is inseparably associated with **THE GARDEN**. In our issue of December 20 we gave a brief summary of the good things that we have in store for readers, and it is with every confidence that we look forward to 1914. The year that has just closed has been a good one for us, and we hope that it has been a good year for our readers. Many have sought advice on gardening difficulties of diverse kinds, and it has been a great pleasure to assist them. We hope many more will write to us during the present year of their gardening successes as well as their failures. We also feel that thanks are due to advertisers who have used our columns during the past year, and hope that readers will continue to support them as they have in the past. Every care is taken to admit advertisements of only reliable firms. To all we wish every happiness and success during the year that has just dawned.

The Preservation of Thatched Roofs.—Those who travel in the country districts must often lament the passing of the thatched roofs that used to be almost universally employed for cottages, barns, stables and other outbuildings. These had the merit of fitting well into the landscape, were cool in summer and warm in winter. Now, galvanised iron, with all its hideousness and other disadvantages, is largely employed. There is a movement on foot to do all that is possible to preserve thatched roofs, and those who are interested in the subject should write to Mr. L. Mark Kenaway, St. Helens, Teignmouth. If an object-lesson of the suitability of thatched roofs for country districts is needed, turn to the illustration on page 9, and imagine the old cottage shown there has a galvanised iron or slate roof.

An Attractive Autumn-Flowering Evergreen Shrub.—Though perhaps more familiar as a pot plant in England south of the Thames and in the West, *Aralia japonica*, or *Aralia Sieboldii* as it is also named, passes through most winters outside uninjured. Flowering usually during October, the large panicles of creamy white flowers form quite a distinct and attractive feature at this season. Their beauty is also considerably enhanced by the large, fan-shaped, rich green leaves. It is quite a good evergreen for the town and suburban garden, so that when plants growing in pots become too large for the living-room and small greenhouse,

or lose their bottom leaves, it is worth while planting them outside. *Aralia japonica* is a very popular plant in the florists' shops, being commonly, though erroneously, sold as the Castor Oil Plant, a name which really belongs to *Ricinus communis*. It may be readily raised from seeds, which will be found listed in most seed catalogues.

An Ornamental Fruiting Thorn.—Apart from their flowers, the majority of the Thorns are very ornamental when in fruit. *Cratægus Carrièrei* is one of the best. Conspicuous as it is when in flower, it is more so when it is bearing its large, orange-coloured fruits. At the present time it is quite an object of beauty, and this is all the more noticeable as it is practically the only one left, the others having been stripped by birds. Probably the fruits of this one are not so palatable to them.

The Value of Beech Hedges.—Hedges are used for many purposes, and there are a host of plants suitable for making them, according to their situation; but few subjects are more effective at the present time than a well-grown Beech hedge. In a dwarf state the leaves of Beech remain on, and for that reason they are valuable as a protection for plants from cold winds, as well as giving a rustic and somewhat warm appearance by their brown, dry leaves during the dark dull days of winter.

Retarding Fruit Blossom.—In order to retard the flowering period of such trees as Nectarines, Peaches and Apricots, it is a good method to withdraw the nails and shreds, or ties, so as to liberate the branchlets from the influence of the brick walls, which conserve and radiate the warmth of the sun's rays. By exercise of timely attention in the matter, it increases the prospects of securing crops of fruits from unprotected trees upon walls. The trees can be nailed or tied up again a week or two before the flowers begin to open. If the old nails and shreds which are removed are subjected to fire, and placed in a sieve when cool, the nails can be easily separated from the ashes and can be used again.

Marram Grass for Paper-Making.—The current issue of the *Kew Bulletin* contains some interesting particulars of experiments which have been conducted in this country in the making of paper from Marram Grass, *Ammophila arundinacea*. This plant grows on most of the sandy shores of the British coast, and, as good paper has been made from its fibre, it would appear to be well worth the attention of those who have such land under their control. It is frequently used for binding sand, and in New South Wales, where it was introduced in 1883, sheep are regularly fed on it, so that there is no doubt it would stand repeated cutting of its leaves. In the Port Fairy district of Victoria, Australia, miles of sand dunes have been reclaimed by planting Marram Grass, whence it has been sent to many other Colonies for the same purpose.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Winter Jasmine.—This is just now very beautiful in flower. Its long sprays of soft yellow give it a peculiar charm of its own, and really ought to be more generally cultivated. It is not particular about the position it occupies, but will thrive in almost any situation, and is always welcome at this season of the year. I know of a large bush growing on a lawn in Stonehouse, and to my knowledge it has been there thirty years. It makes a good show of its pretty yellow flowers during the winter months, and is so useful for room decoration.—L. W. DRIVER, *Stonehouse*.

A Little-Known Ranunculus.—I am sending you three photographs which may be of interest to you. No. 1 is *Ranunculus Matthewsii*. This is not so good as usual, as, owing to the very mild winter, it has been in flower for over three months, and has now a number of blooms still out, the individual flowers being 3 inches in diameter. No. 2 is *Ourisia macrocarpa*. Dr. Cockayne thinks this a new species. It is not so strong a grower as the type, but does well in cultivation. No. 3, *Aciphylla Colensoi*, is rapidly disappearing owing to rabbits and fire.—W. WILLCOX, *Queens-town, New Zealand*.

A Pretty Tea Rose.—I refer to the fairly recent variety *Rosomane Narcisse Thomas*. We have grown it for two years, and can vouch for it being a good grower and free bloomer. The beauty of its foliage is very noticeable, having more of that attractive bronze tinge in the early stage of growth than the majority of Roses, and passing finally to a deep glaucous green. Perhaps the colour of the flowers may be described as scarlet-crimson with a suffusion of apricot; at least, this will do for its bud and half-developed stage, when it is really at its best, for, like all other varieties possessing such beautiful shades of colouring, it loses some of its richness on opening.—C. T., *Highgate*.

Mildew on Roses.—In reply to Mr. Charles P. Serjeantson in your issue for December 27, page 642, in which he asks for the experience of others who have given Messrs. Gleeson's Serum a trial, I can fully bear out every word Mr. E. Molyneux said in its favour. I have used it rather extensively during the past season, with the most remarkable results. Early in August the majority of our Roses became badly infested, one or two varieties which are prone to it especially so. We applied Serum according to directions, and it acted like magic. Some shoots which were perfectly white were thoroughly cleansed, and in a few days the foliage became quite natural. We gave two more slight applications at intervals of about ten days. The bushes became most healthy, and produced a wealth of bloom, owing partly to the mildness of the weather, right up to the middle of December, such as I have never experienced before during the thirty years that I have lived at Aldenham. The most satisfactory point about the Serum is that it leaves no sediment and appears to be quite harmless to any flowers or foliage. I have also used it with the same good

results on winter Cucumbers, Tomatoes and other plants affected. When more widely known, I predict a great future for this preparation.—E. BECKETT, V.M.H., *Elstree*.

Plants Flowering on Christmas Day.—I think the following list of flowers in bloom, made in my garden on Christmas Day, may be of interest as showing the extraordinary mildness of the season: White Marguerite, Chrysanthemum, Wallflower, Violet, Passion Flower, yellow Jasmine, Marigold, Geranium, Feverfew, coloured Primrose, white Primrose, yellow Primrose, Cornflower, purple-tipped Clary, Love-in-a-Mist, Snapdragon, Godetia, Silene, Brompton Stock, Tobacco Plant, Nasturtium, Lobelia, Aubrietia, yellow Alyssum, Campanula attica, Daisy, Delphinium and six varieties of Roses. The garden is situated very



RANUNCULUS MATTHEWSII IN A NEW ZEALAND ROCK GARDEN.

high and is a good deal wind-blown. Has it been known before that Aubrietia and Alyssum are blooming at the same time as Lobelia and Geraniums? In the woods and fields of the Isle of Wight I have also seen in the last day or two Primroses, blue Dog Violets, Ragwort in full bloom, Dandelion, Daisies, Speedwell, Camomile Daisy, Cow Parsley, Scabious, Groundsel, white Violet and pink Campion, and the catkins are out on the Nut trees.—K. H., *Isle of Wight*.

Pruning Gooseberry and Currant Bushes. In "Notes of the Week," issue December 6, the reference to the pruning of Gooseberry and Currant bushes will be welcomed by many readers. In country, and even many suburban districts birds are very destructive. Undoubtedly, autumn pruning (as relating to pruning and its effect on the bushes) is

more beneficial than that done in the spring. At one time I grew about an acre of these bush fruits, and tried pruning at different dates. One year I pruned a Gooseberry bush very early in the autumn. There being so many others for the birds—in a bird district—to tackle, this one bush was left untouched. In spring, this early-pruned bush commenced to grow nearly a week earlier than the spring-pruned ones, and, moreover, kept ahead and bore a heavier crop of finer berries. I have never tried the effect of syringing with petroleum; but if birds can be kept at bay by its application, then the result will be of much advantage to fruit cultivators.—G. G.

Secateurs v. Knife.—Mr. Duncan Pearson's note on page 631, issue December 20, 1913, is timely, but allow me to say that Auberts' secateurs are the best, because both blades cut clean and are so powerful that a shoot of any size that the opening will allow can be readily cut, almost as clean as with a knife. The newest make have one handle turned back to form the spring which opens the knives, and cannot clog with chips or soil. Auberts also make what they call French Vine loppers in two sizes, with handles about twenty inches long. These are very powerful, and require both hands to use; but they cut even old wood like cheese. Both of these are kept by seedsmen, and are far preferable to the old sorts with wooden handles, which have only one cutting edge, and thus bruise the wood below the cut on one side.—GEORGE BUNYARD, *Maidstone*.

Plants Flowering Late.—The following plants were in bloom at Bryn Oerog, near Llangollen, on December 14, 1913: *Rudbeckia Newmanii*, Wallflowers, Pentstemons, Antirrhinums, *Salvia dulcis*, *Laurustinus*, *Aubrietia Lloyd Edwards*, *Helleborus foetidus*, *H. niger altifolius*, Ivy-leaved Geraniums, Pink Cyclops, *Erigeron philadelphicus*, *E. mucronatus*, *Violas*, double Furze, *Potentilla splendissima*, Primroses (various), double white Clematis, *Menziesia polifolia alba*, *Lithospermum prostratum*, *Oxalis arborea*, *Arabis albida*, yellow Polyanthus, *Galanthus cilicicus*, *Eomecon chionantha*, *Lobelia fulgens*, hybrid Heucheras, white Fumitory, *Erinus alpinus*, *Linum arboreum*, *Delphinium Queen of Delphiniums*, *Chrysanthemum maximum* Mrs. C. Lowthian Bell, *Heuchera Edge Hybrid*, *Verbena Miss Willmott*, *Hypericum moserianum*, *Gaillardias*, *Scabiosa caucasica*, *Lupinus subcarnosus*, *Achillea Single White*, *Campanula persicifolia* (white, also the blue),

German Scabious (various), *Viola cornuta*, *Anemone coronaria* (many), Rose Dorothy Perkins, Hybrid Tea and China Roses, common Honeysuckle, *Cyclamen cilicicum*, *Cheiranthus Allionii*, *Arabis aubrietoides*, *Mesembryanthemum* (rose coloured), *Asteriscus maritimus*, double yellow Alyssum, *Alyssum citrinum*, Sweet Alyssum (white, annual), *Campanula garganica*, *C. g. hirsuta*, *C. muralis*, *C. m. major*, *Iberis gibraltarica*, *Convolvulus Cneorum*, *Potentilla willmottiana*, *Polygonum vacciniifolium*, *Polygala Chamæbuxus*, *P. C. purpureus*, *Helianthemum* Mrs. C. W. Earle (double red), a salmon red *Pulmonaria*, *Myosotis dissitiflora*, Red Valerian, Alpine Phlox Vivid, *Auricula Yellow Beauty*, *Iberis sempervirens*, *Jasminum nudiflorum*, *Schizostylis coccinea* and many others.—E. J. LLOYD EDWARDS.

Corydalis thalictrifolia.—This charming plant, so well portrayed in your issue of December 13, page 621, is of more than passing interest. Though introduced in 1900 by Messrs. J. Veitch and Sons from China through their collector Mr. E. H. Wilson, it is not so generally grown as it deserves to be. It makes a pretty plant for the rock garden, but it can only be regarded as half-hardy. Its elegant foliage and pale yellow flowers make it a charming subject for edging groups of plants in the cool greenhouse; it also has the merit of remaining in good condition for a long time. It is not so generally known that it is an excellent subject for house furnishing, as it keeps in a good state for weeks, even under the adverse conditions that obtain in London. Its cultivation presents no difficulty, as it is easily raised from seeds sown in a cold frame or greenhouse, while at all stages of its growth it requires quite cool treatment. It should prove a very useful subject for the amateur with a small greenhouse.—IAN.

The Horseshoe Fern.—In your answer to "Mrs. J. B. L.," page 628, December 13, you state that this Fern is unknown to you. For the benefit of your correspondent allow me to say that it is a name sometimes applied to the New Zealand *Trichomanes reniforme*, which is, however, more often known as the Kidney Fern. Unlike the other members of the genus to which it belongs, the fronds are quite simple, that is, not divided in any way. They are from 2 inches to 4 inches broad, of a transparent nature, and supported on stems from 4 inches to 6 inches in height. The individual fronds are kidney-shaped, with a deep notch at the base. This *Trichomanes* belongs to the class known as Filmy Ferns, and thrives best in a close, moisture-laden atmosphere, such as under a hand-light or in a close case in a fernery kept at a greenhouse temperature, while it may also be grown in a Wardian case in a room. Shade from sunshine in any way is very necessary. It thrives best in a mixture of fibrous peat and soft sandstone with a little sand, and needs a liberal quantity of water.—H. P.

Chrysanthemum Elegance.—Re "Caledonia's" note on single-flowered *Chrysanthemum Elegance* in your issue of November 29, page 595, I may say I grew this variety some years ago, but discarded it, as it was too late in flowering for this district. In notes on early-flowering *Chrysanthemums* in a Scottish contemporary in November, 1905, I stated that *Elegance* was just showing colour at the time of writing (October 18). Our Scottish climate is, like its coast-line, variable. October varieties suit the seaboard, but in the Midlands we want varieties that will flower from the end of August onwards. Our season is a short one, blooms and buds being sometimes frozen past recovery by the first week in October. This season is an exception, a full harvest being vouchsafed. During the past twenty years' residence here I cannot remember a season so immune from frost. Only one morning was there sufficient (7°) to blacken Dahlias. In the same notes *Pink Beauty* is classed as too late and *Miss Rose* too small, both discarded. I remember the stubby growth of *Elegance*. I would get cuttings either from Messrs. W. Wells and Co. or Messrs. H. J. Jones, probably the latter.—S. H., *Stirling, N.B.*

FORTHCOMING EVENTS.

January 13.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster.

January 22.—Gardeners' Royal Benevolent Institution's Annual General Meeting at Simpson's, Strand, London.

WHICH IS THE GUERNSEY LILY?

WE have just read the article on the above plant by Mr. Jacob on page 619 of your issue for December 13, 1913, and can only say, after reading this and many articles that have appeared in the horticultural Press of late, how regrettable it is that such a useful and interesting family—and one that is so easily accommodated and which gives such ample return in pleasure for any trouble taken in growing—should be in such a terrible muddle as regards nomenclature. Unfortunately, *Nerines* have never been popular flowers. They are admired when in bloom, but have never been greatly sought after, as have the Daffodil and Rose, and this want of popularity is the root of the trouble that is now existing over their many names. If you buy a Daffodil and it is wrongly named, though you do not know it yourself, the chances are that your neighbour, when looking over the garden wall, can correct the label and is proud of the fact. The same may happen with a wrongly named Rose and many other plants and flowers, because they are popular and well known to every owner of a garden, whether large or small; but, unfortunately, with the *Nerine*, though a plant of quite as many parts, it is altogether different.

Nerine sarniensis, the true Guernsey Lily, bears umbels of rosy carmine blooms, having neither orange nor scarlet nor salmon blood in them. They glisten somewhat in the sunlight, but not nearly as much as many others of the family. This plant until a few years ago was quite at home in the island of Guernsey, and was to be met with very frequently in the larger as well as in the cottage garden; but, alas! it is now very scarce, and becoming more so as each year rolls by. It is, perhaps, more than most *Nerines* very opposed to moving, neither does it like confinement, and on this account is not such a good pot plant as are many of the others.

One of the reasons, we believe, for so many totally distinct *Nerines* being named alike is that they are so awfully slow to propagate by offsets, but quick by seed, and a very large number of people, having a great liking for seeds and their raising, and having been enraptured with someone else's *Nerines*, have asked for seed of them, and when the seedlings have flowered they are named as the donor has named his.

Mr. Jacob says his blooms of *N. sarniensis*—and we believe he has the true variety, judging from the description he gives of his flowers; we mean the blooms from the bulbs bought in Guernsey—were called *rosea*. This surely means that it is a variety (sport or hybrid) of *sarniensis*; but we think that such a name as *rosea* being applied to a variety of a rosy carmine plant is very misleading, and only tends to confuse growers, as the difference between a rosy carmine, under certain conditions of growth, at certain seasons and by certain lights, and a *rosea* is not sufficiently distinct, and suggests, again, that it is a seedling or sport, which for some better name the owner has called *rosea*, not knowing what it is from or what its parent was like.

We think, now that the *Nerine* is being taken up in earnest, it is quite time that some classification was started.

Guernsey.

SARNIENSIS.

SEASONABLE NOTES ON AURICULAS.

AT one time the Auricula was largely cultivated, especially by amateurs, but for some reason it ceased to be popular. Now, however, there are unmistakable signs that it is once more in the ascendant.

For the Outdoor Garden.—The Auricula is an ideal subject for the amateur, who may either grow it in the border or in unheated frames. Two varieties, viz., Celtic King and the yellow Queen Alexandra, are splendid for the open border, the latter producing a fine effect when planted in small groups; but it is much improved by frame culture.

As a Frame Plant.—I fully recognise the value of the Auricula for the border and cottagers' window-boxes, but to secure the finest results a cold house or frame is necessary, especially if we wish to exhibit or cultivate what is known as the show section, which embraces the selfs, green-edged, grey-eyed and white-edged.

The Position of the Frame should, if possible, be on the south side of a building during the dull period of the year, say, from October to March; but in summer a north aspect is preferable. In spite of some old writers, there are few, if any, secrets regarding the cultivation of these beautiful flowers. The principal factors are a sweet rooting medium, cleanliness, and careful watering at all times.

Plants During January.—For the last two months little attention has been needed beyond giving plenty of ventilation and keeping the plants as dry as possible overhead and at the root without their becoming dust dry. Similar treatment will be required during the month of January; but if the weather remains open and tolerably dry, a little more water may be given at the roots, as the plants will now be preparing to awaken from their resting period. Woolly aphis and green fly are the chief insect pests, and directly these are seen the frame ought to be vaporised with XL All. The latter pest is easily destroyed, but the former is more difficult to dispose of. A little methylated spirit or tobacco powder will kill all that congregate around the stems of the plants and on the surface of the soil if the fumigation does not prove effectual.

Roots Decaying.—It sometimes happens that a plant (particularly through the winter months) looks sickly, and if we examine that example we shall find that the tap-root has begun to decay at the bottom and the decay is gradually working up through the plant. As a rule, it can be easily lifted out of the soil, when the rotten portion must be cut away, and, after some powdered charcoal or lime has been placed over the wound, the plant should be put into a small pot, where it will soon recover if carefully watered.

Some Good Varieties.—Most firms offer Auriculas fairly cheap if purchased by the dozen and the selection is left to them; but for the uninitiated I append a list of useful and easily grown sorts. Alpine—Argus, Bluebell, Claude Halcro, Duke of York, Firefly, Ganymede, General Buller, Martin Smith, Mrs. H. Turner, Rosy Morn, Teviotdale and Uranie. Show—Henry Wilson, Love Bird, Mrs. Henwood, Colonel Champneys, William Brockbank, Acme, Heather Bell, Rachel, Favourite, Mikado, Mrs. Phillips and Ruby. T. W. BRISCOM.

PHLOXES AND PENTSTEMONS FOR LARGE AND SMALL GARDENS.

TOO often those who only have small gardens sit down and bemoan the fact, and envy those who have at their disposal broad acres of open land and woodland glades. It is true that the latter can attempt gardening on a more lavish and comprehensive scale than those who have a modest quarter of an acre or even less. Yet in such a limited space many excellent results and a vast amount of pleasure can be obtained, provided the owner is enthusiastic enough and uses common sense in planning and planting. One of the most interesting and charming gardens of small dimensions that we have seen is at Ditchett, Romford, the residence of Dr. S. Wright, a well-known and highly respected resident, and one who is particularly keen on gardening.

Although the garden at Ditchett is less than a quarter of an acre in size, it is filled from spring until winter with interesting, beautiful, and often rare flowers. Roses, Delphiniums, Phloxes and Pentstemons are his favourites, and the last two named are as fine as, or even a little better than, any we have ever seen. The bed shown in one of the illustrations was so good and so full of flowers that the camera could not penetrate to the interior; but enough are shown to indicate how well these Pentstemons were doing. Phloxes, as will be seen in another illustration, were also wonderfully good; and with a view to assisting those of our readers who may be similarly situated, Dr. Wright has kindly given his methods of cultivation, which are as follow:

"The Phloxes are raised annually from cuttings taken in the spring. As soon as the old plants have growths 4 inches long they are thinned down to four, and these tied out on short sticks. The 'thinings' are used as cuttings and inserted in boxes of light sandy soil, and, as soon as they are rooted, planted out in a nursery bed. They give good heads of bloom late in the autumn, when the parent plants are over; they are then planted in a prepared bed and left for two years. About sixty varieties are grown; the best of which are Dr. Konigshofer, Etna, Baron von Dedem, G. A. Strohle, Tapis Blanc, Gruppen Königin, Maja, Selma, America, Le Mahdi, Mme. Paul Dutrie, Embracement and Goliath.

The Pentstemons are all home-raised except one variety (George Home). A bed of seedlings was grown annually for several years and cuttings taken from any that appeared worth propagating. Cuttings are taken as soon as they can be obtained

after the end of August, put in boxes of sandy soil 6 inches deep, and, as soon as a little growth shows, the tops are pinched out, so that one gets strong plants with three or five growths to plant out in spring. They have been grown on the same site for six years (though one does not recommend this).

The bed is manured with farmyard manure in November, bastard-trenched, and left rough until about a fortnight before replanting. The pick of the collection is a seedling, edged and flushed with pink (in the way of *Rosa alba*), but the ground colour is a pronounced cream—almost yellow when first opening—an immense flower, tall and strong in growth, every flower on the spike opening perfectly."



A BORDER OF MIXED FLOWERS IN DR. S. WRIGHT'S GARDEN AT ROMFORD.

Many of the Delphiniums in this garden are seedlings of Dr. Wright's own raising, and some that we saw earlier in the year were very charming indeed. They included a wide range of colours; the individual flowers were large and well placed on tall, massive stems that were a sure indication of good cultivation. Other fine herbaceous plants, many of them raised from seed, are Oriental Poppies, including some unique seedlings from Jenny Mawson; Geum Mrs. Bradshaw, varieties of *Chrysanthemum maximum*, *Achillea Ptarmica* The Pearl, *Heleniums*, *Statice latifolia*, *Nepeta Mussinii*, *Rudbeckia speciosa* and perennial Sunflowers.

IN A HAMPSHIRE GARDEN.

SOME OF THE NEWER DECORATIVE ROSES.

(Continued from Vol. LXXVII., page 648.)

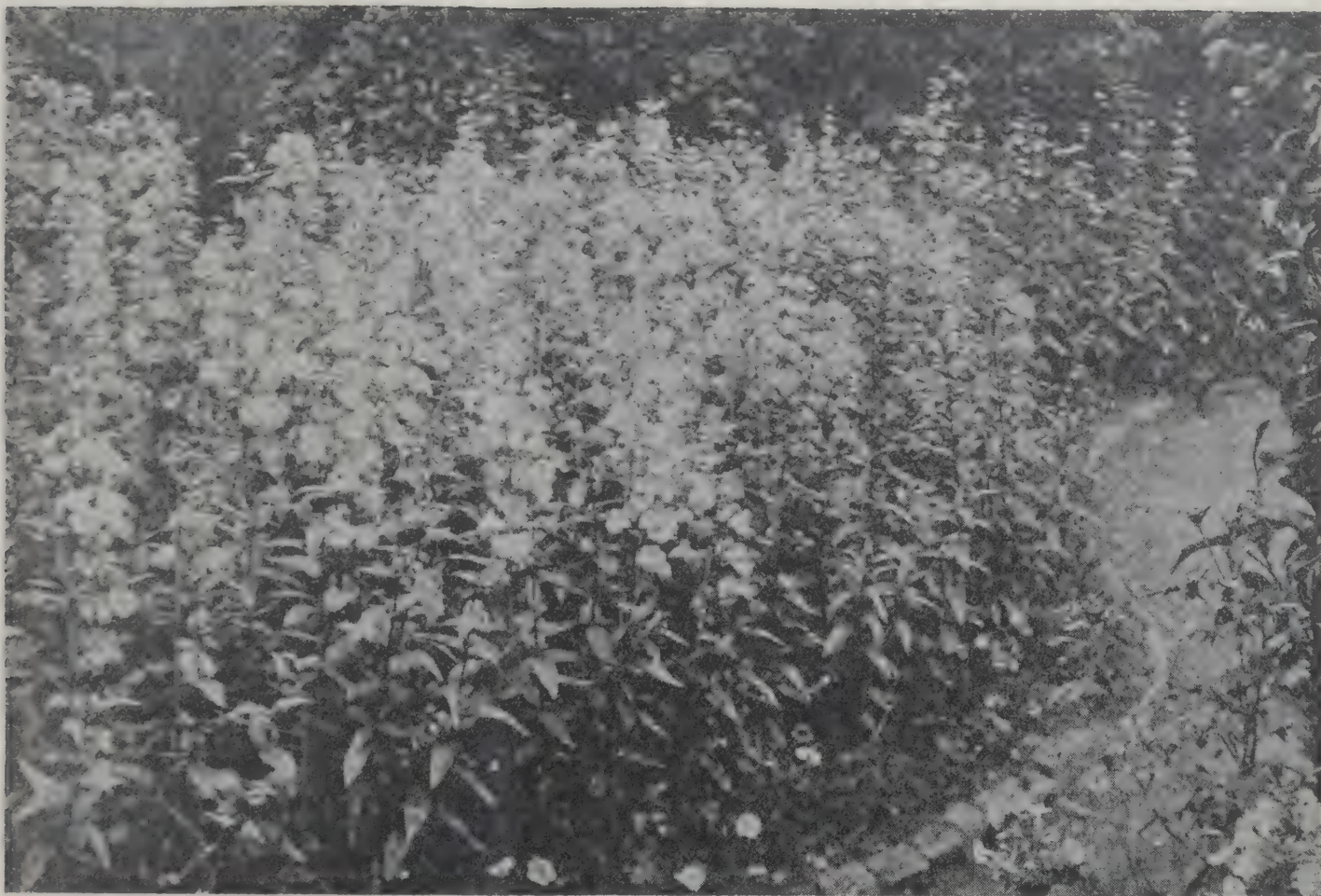
Mrs. Leonard Peirie (Alex. Dickson and Sons, 1910).—I am inclined to think this is one of the best of the decorative Roses of that somewhat indefinite colour yellow, fading to primrose cream and white. In the bud it is a good distinct colour, flushed on the outside of the petal with carmine. In the fully open flower this becomes pale sulphur to pale cream. The flowers are of good shape, freely produced, of delightful fragrance, and the plant is an excellent grower and makes an ideal bedding plant.

Mrs. Sam Ross (Hugh Dickson, 1912).—I referred to this Rose when writing of the exhibition varieties, but it is too good a garden Rose to leave out here. It is a deeper colour than the last named, being deep chamois yellow, shading to light primrose, with a touch of buff on the outside of the petals which gives it the deeper colour referred to. Its large, full and well-shaped flowers are very freely produced, and it is quite a good grower; fragrant.

Mrs. Wakefield Christie Miller (S. McGredy and Son, 1909).—This makes a fine splash of colour as seen from a distance, but the flower is more like a large *Pæony* than a Rose. Still, some people greatly admire it. It is very free-flowering, especially in the autumn, and for an Irish-raised Rose particularly free from mildew.

My Maryland (J. Cook, 1909).—An American-raised variety, and very good under glass, I am told. It has not been bad out of doors here with me, but it is not as good as Mme. Segond Weber, which it resembles, and I do not think we want them both. There was an excellent table at the autumn show of the National Rose Society of this Rose (from under glass) that created a good deal of curiosity as to its correct name, and the judges must have found it difficult to decide between it and Melody. Eventually My Maryland was placed second; but as there exhibited, namely, from under glass, there was no denying its beauty.

Old Gold (S. McGredy and Son, 1913).—This is undoubtedly one of the freest-flowering Roses we have. My small bed of five plants came into flower in May, and I have flowers of it in front of me as I write in mid-December. I cannot recall passing that bed without seeing some flowers on it during the whole period. The habit of the plant, apparently, is to continually send up fresh shoots, the first flowers of which are out before the last of the previous shoot are over, so that we have at last the true Hybrid Perpetual, although it may also be, and is, a Hybrid Tea. In its early stages the bud might almost be taken for Irish Elegance—slightly deeper in shade, perhaps—and



A FULL BED OF WELL-GROWN PENTSTEMONS.

it is in this stage the flower should be cut and not allowed to develop on the plant, as it lasts a long time in water. If left on the plant, the colour goes quickly, and the main beauty of the flower is lost. The dark bronze foliage sets off the lovely buds and is a fine contrast. An excellent grower. The flowers are held erect and on strong footstalks that require no artificial aids or wiring to keep them erect when cut. It is not a single, but has very few petals (after the style of Mrs. Alfred Tate). Quite mildew-proof here, fragrant, and strongly recommended.

Ophelia (William Paul and Son, 1912).—I first saw this Rose at the Chelsea International Exhibition of 1912, and was much taken with its refined shape and appearance. It is, in fact, almost Tea-like in both. Colour, pale flesh, flushed rose. It is not a large flower, but a very beautiful one. Not unlike Margaret, but paler.

Queen Mary (Alex. Dickson and Sons, 1913).—To my way of thinking this is *the* Rose of the year, and not only of the year; I am not sure it would not get my vote as the most beautiful of all Roses. Only those who have grown it can know how very beautiful it is. The large tripod of flowers that were put up when it secured the gold medal were not really typical; they were, in fact, grown under glass, and lacked the delicate refinement of the more naturally-grown blooms. In fact, I saw them commented on as not unlike Juliet! I myself cannot see any resemblance. I once heard a discussion between two well-known rosarians as to the respective merits of Mildred Grant and, I think, White Maman Cochet. The Tea man closed the discussion by calling

Mildred Grant "a bold, brazen-faced hussy." That is perhaps an unfair description of Juliet—but! The only thing in common between the two Roses is that they are both bicolors; there the resemblance ends. Queen Mary opens up a new vista for us. An artist has been at work with an entirely new method of applying his colours. There is nothing quite like it in the Rose world. One has seen fleeting glimpses of it perhaps in an unusually highly coloured flower here or a chance bloom there, but

For as the grower becomes more expert his ambition increases, and often he is tempted to try varieties with which the chances of success are small. But a town garden, intelligently looked after, gives better results than one in the country in which Roses are left to grow themselves; and, given a moderately open position, the number of sorts that can be made to thrive in the neighbourhood of large cities is limited only by the space at the gardener's disposal and willingness to plant.

here it is fixed. If the beauty of any Rose is enhanced by the dew on its petals, surely this is the one. I am not going to pretend to describe its colour. Those who want to know what it is like must grow it. [A coloured plate of it appeared in the issue for October 11.—ED.] I have turned up the raisers' description, but even their well-known eloquence for once has failed them. One reads that it created a sensation among all those who saw its first flowers, so much so that all kinds of schemes as to its future were formulated. Can one doubt that the right solution was arrived at when it was decided to name it Queen Mary?

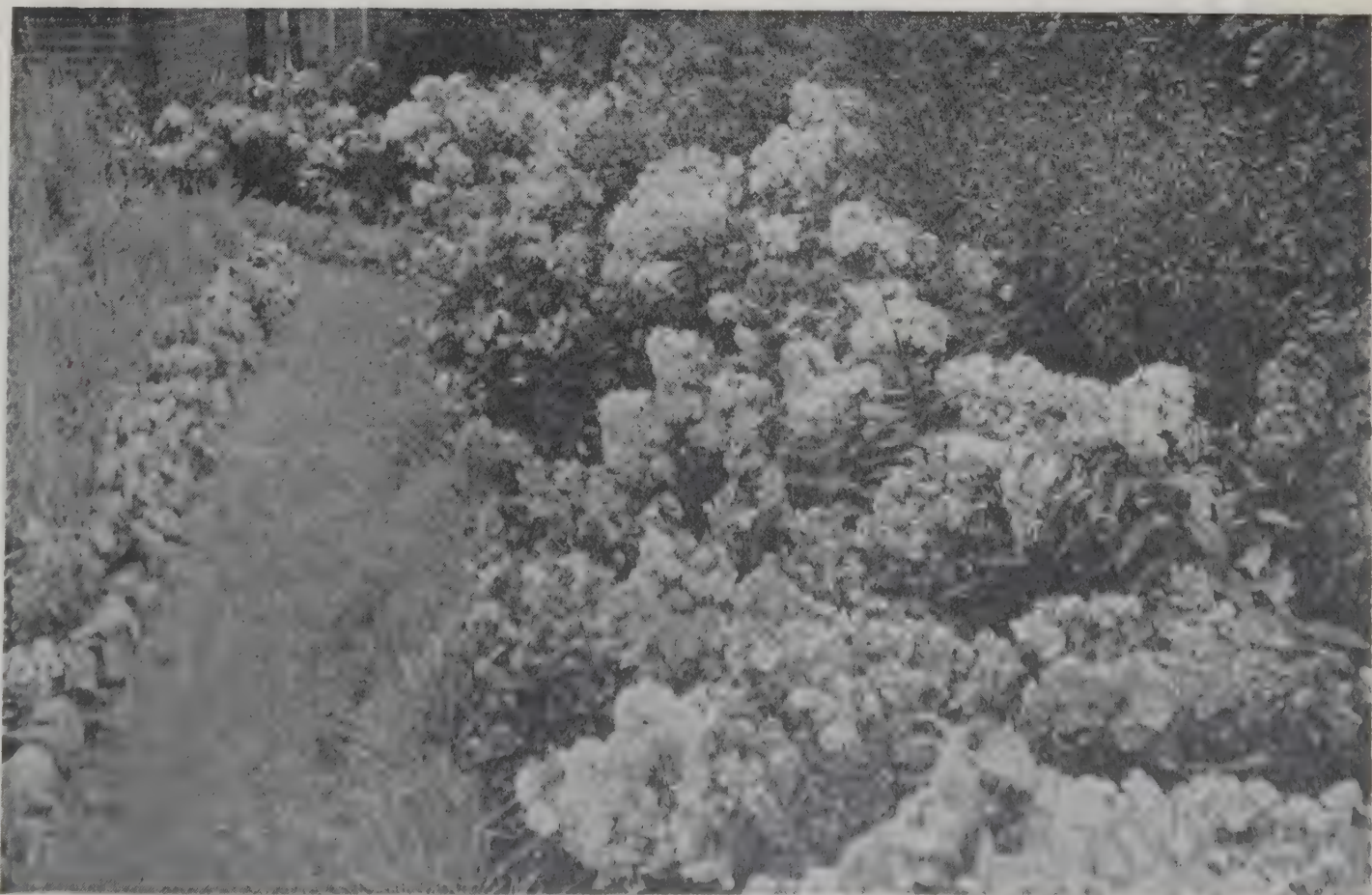
Southampton. H. E. MOLYNEUX.

(To be continued.)

ROSE-GROWING IN TOWN GARDENS.

THE average town gardener is apt to become a little wearied by the repetition of some dozen names, which constitute the official list of town Roses.

Certainly he never does limit his selection solely to these varieties, and taste alone determines his final choice.



BORDERS OF HERBACEOUS PHLOXES IN A SMALL GARDEN.

The Best Varieties to Plant.—The Hybrid Tea Roses furnish most of the best varieties for town culture, and each year sees the addition of many striking novelties to this section, already the largest, as it is the most popular, and the one best suited to this climate. In the selection of Roses for towns issued by the National Rose Society, the following Hybrid Teas are included: Caroline Testout, Dr. O'Donel Browne, Gustav Grünerwald, J. B. Clark, La Tosca, Mme. Abel Chatenay, Mme. Ravary and Prince de Bulgarie. It goes without saying that the considered opinion of such a body of experts is beyond contradiction, and, for general purposes, there is no doubt this list represents the front rank of town Roses. All are well-known and popular sorts, and few comments are needed. Of the varieties named, only the first four are suitable for exhibition. Prince de Bulgarie and J. B. Clark appear in the list for the first time in the society's catalogue for 1914. The former is a pretty decorative Rose with fine glossy foliage and of branching growth. The colour

being deep rose pink. Of vigorous growth, shapely in habit and fragrant, it flowers very freely throughout the season, and is a fine exhibition variety. Miss Cynthia Forde is rather like a deeply coloured Caroline Testout, and though perhaps a little inferior to that variety in size of bloom, is of far better shape, and has not the vice of occasionally balling over. Mrs. David McKee, an excellent large-flowered yellow, is very free-blooming and of fine habit, and makes a good town Rose. Joseph Hill is also good, both in blossom and foliage, though not quite so free-flowering as the last named, and rather addicted to mildew, though not badly. Mme. Melanie Soupert is becoming increasingly popular in town gardens, and justly so. It is excellent in every way, except that it has also a slight tendency to mildew, which requires to be checked. Its fine foliage, spreading growth and freedom of flowering render it ideal as a garden Rose, and it is quite in the front rank for exhibition. Though not described as yellow, that is the colour most

is *Erica mediterranea hybrida*. It rarely exceeds a foot in height, and often only reaches a modest 6 inches, making neat tufts of green, branching stems and foliage that from December until well into February are smothered with rose pink flowers. It is quite hardy, and appears to do well anywhere, showing preference for a half-shady position in a sandy peat soil. However, peat is not essential, for, like other Heaths, it will thrive in loamy soil to which leaf-mould has been freely added. The one element to which most members of the Heath family object is lime, and it is almost hopeless to try to establish a Heath garden in a very chalky soil.

SOME GOOD EVERGREEN HEDGE PLANTS.

THE following notes direct attention to a number of useful hedge plants with persistent foliage which are suitable for general culture in the British Isles or for certain areas thereof. Attention is drawn to any little peculiarities of culture which particular subjects may require under the respective headings, while those plants are also indicated which are only suitable for certain localities:

Common Holly (*Ilex Aquifolium*).

—There can be no doubt that this is one of the best of all evergreen hedge plants, for not only does it form an impenetrable fence which keeps in good condition for a very long period, but it presents a pleasing appearance also. Although large plants may be used for hedges, it is usually better to start with those which are grown from 2 feet to 4 feet high. Care must be taken that they are well furnished with branches to the base, for if the hedge is commenced with a thin bottom, it is very difficult to induce it to furnish well afterwards. The plants should be inserted from 1 foot to 1½ feet apart, and it is usually advisable to remove the points of the shoots soon after planting. Do not allow much height growth until the lower parts of the hedge are quite dense. Planting may be carried

out in April or September. Other kinds of Hollies are sometimes used for hedges, such as those with golden and silver foliage and the large-leaved Hodgin's Holly. The former kinds are quite appropriate for some positions, but large-leaved sorts are generally inferior to the common Holly.

Common Yew (*Taxus baccata*) is another useful hedge plant, which lasts in good condition for a very long time. In fact, Yew hedges may be seen flourishing at the present time which were planted over a century ago. The Yew, like the Holly, thrives on a great variety of soils, and may be planted throughout the country except where the ground is water-logged. It takes rather a long while in establishing itself, but when it once becomes thoroughly established, growth is fairly rapid. Some people prefer plants raised from cuttings rather than those grown from seeds, owing to greater uniformity of growth. Plant at the time recommended for Holly.



A BEAUTIFUL WINTER-FLOWERING HEATH: *ERICA MEDITERRANEA HYBRIDA*.
The photograph was taken a week before Christmas.

is very variable, ranging from the palest pink to almost an orange shade. J. B. Clark is what is termed a rampant grower, and is difficult to manage. It is quite unsuitable for bedding, by reason of its size, and, unless required for exhibition, should be pegged down or treated as a pillar Rose. Though usually the flower is coarse, it is still the best red Hybrid Tea for general purposes. La Tosca is also a tall grower, though not, like J. B. Clark, an ugly one. It is a most accommodating Rose, and invariably gives a good account of itself, no matter how poor the soil may be, but requires a good deal of room. The other varieties are all of medium height.

Newer Varieties.—As they become established in popular favour, no doubt some of the newer sorts will find their way into the National Rose Society's list. Two that seem to deserve that honour are Lady Alice Stanley and Miss Cynthia Forde. The former is one of the most reliable Roses. In colour it is silvery pink, the reverse of petals

frequently seen in it, the delightful suffusion of amethyst in the young flowers being very fleeting. Rayon d'Or may prove a great acquisition when robust plants are obtainable at a moderate price, if its unfortunate habit of dying back is due only to over-propagation, as is so often the case with new varieties. But it certainly seems to have this weakness in its constitution. Duchess of Wellington is a beautiful decorative yellow, capable of becoming a success in many town gardens. With other varieties I will deal in my next article.

P. L. GODDARD.

A HARDY WINTER-FLOWERING HEATH.

(*ERICA MEDITERRANEA HYBRIDA*.)

THE great charm of the Heath garden is that it provides flowers the whole year round, and this is one reason why Heaths are so rapidly coming into favour. The best of all the winter Heaths

Oval-leaved Privet (*Ligustrum ovalifolium*).—Although this plant is overdone in many places, it cannot be overlooked, for it grows into a fine fence quicker than any other subject, and it is very cheap. Its leaves are evergreen in most places, although in some of the colder districts they may be shed during a cold winter. If plants a couple of feet high are placed from 12 inches to 15 inches apart, a good hedge will result in three or four years' time. It is a good plan to cut the plants back for a distance of from 9 inches to 12 inches during the first year, and afterwards check height growth until the sides are quite dense. Any kind of soil is suitable if manure is applied, and planting may take place any time between early September and April. The golden-leaved variety of this species is also available.

Holm Oak (*Quercus Ilex*).—This tree is not often used for hedges, although it is excellent for the purpose in the milder parts of the country. It stands clipping well, and forms a dense hedge up to 15 feet or 20 feet high. Moreover, it withstands exposure to sea air very well. Being a difficult subject to transplant, it must be planted while quite small, the best periods being late April and early May and September.

Berberis Darwinii may be used for hedges in the Midlands and South, but it should be treated in an informal manner rather than as a very formal hedge, for although it withstands a fair amount of clipping, constant pruning is likely to cause it to become thin about the lower parts. *B. stenophylla* may be used in a similar manner. As a rule, one pruning a year, as soon as the flowers fall, suffices. They thrive in any good garden soil.

Escallonia macrantha.—There are few better hedge plants than this for the South-West Counties, in places where great strength is unnecessary. It forms a very nice hedge from 5 feet to 6 feet high, and may be kept at a width of from 12 inches to 15 inches. Its dark green foliage and pretty, rose-coloured flowers are equally admired. Few plants stand sea air so well or establish themselves better. Planting may be carried on from September to April.

Olearia Haastii is another shrub which is well worth consideration. It gives excellent results in the vicinity of the sea, and also inland. An annual pruning serves to keep it quite dense and within bounds. This pruning should be given as soon as the flowers fade, for by pruning at that time the dead flowers are removed, which otherwise are rather unsightly. It is at its best when allowed to grow from 2½ feet to 3½ feet high. Planting may be carried on at any period during autumn, winter or early spring.

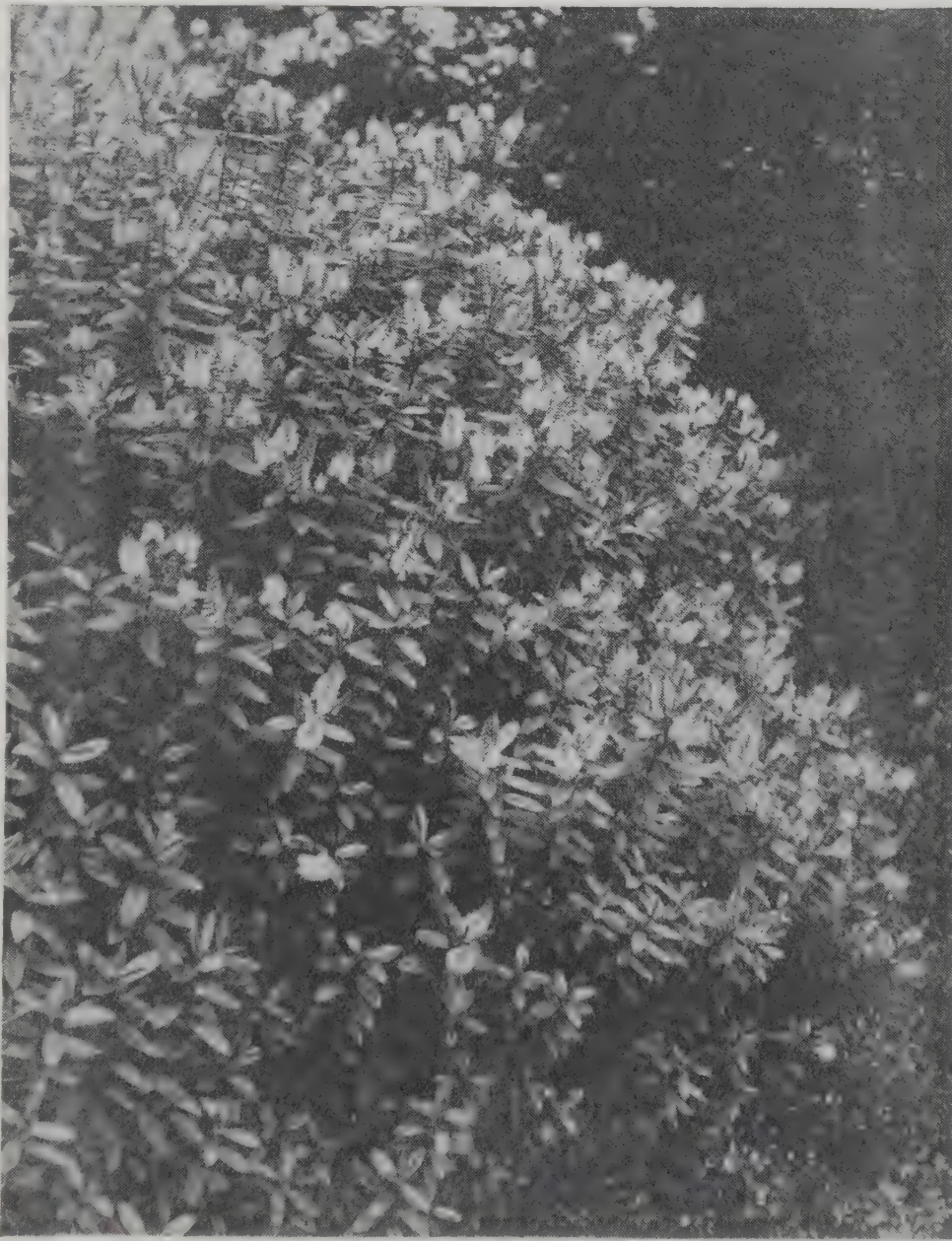
Common Laurel (*Prunus Laurocerasus*).—This is utilised as a hedge plant in some places, but it is not one of the most satisfactory subjects, for it is very apt to become thin about the bottom, and the large leaves look very unsightly if disfigured during the clipping. As a rule, such hedges are usually pruned with knives or secateurs, which,

of course, adds considerably to the labour. The Laurel has an advantage, inasmuch as it thrives in poor, sandy soil, and may be planted in shade.

Lawson's Cypress (*Cupressus lawsoniana*) introduces a coniferous tree which is sometimes used for fancy hedges. It cannot be strongly recommended, for it is very difficult to keep it well furnished with branches about the lower parts. Its great value is as a wind-break. The same remarks apply to *Thuya plicata*, or *T. gigantea* as it is frequently called. Both trees are unsuitable for dry soils and an impure atmosphere.

Common Spruce (*Picea excelsa*).—Although this tree cannot be recommended for general planting, it is well worth consideration for exposed positions on high land, more particularly where the ground

the innumerable other flowers borne out of season owing to the mild weather so far experienced. With the exception of varieties and hybrids of garden origin, practically all of the shrubby Veronics are natives of New Zealand. No fewer than ten distinct Veronics are enumerated in the list of December-flowering plants at Goodwood, issued by the Duke of Richmond and published in our issue of December 20, 1913. Probably the species that has given the best account of itself is *V. Andersonii* and its variety *variegata*, both of which still flower profusely in many parts of the country. The illustration of *V. macrocarpa* is prepared from a photograph taken in a Surrey garden on December 18, where it had been flowering for some weeks past. The graceful *V. salicifolia*, with Willow-like leaves, together with *V. buxifolia*, with Box-like leaves, are also flowering freely this winter. There are certain flowers, like the yellow Jasmine, Winter Sweet and Witch Hazels, that we look for annually among our garden shrubs, but this season we find the list so far extended as to include not only Veronics, but Roses, Rhododendrons, Cytisuses, Hypericums, Rosemary, *Solanum jasminoides* and *Spiræas* in variety.



VERONICA MACROCARPA FLOWERING IN A SURREY GARDEN IN DECEMBER.

is inclined to be wet. In addition to forming good, rough shelter hedges, it is also useful for wind-breaks in nurseries and other gardens. The North American White Spruce (*P. alba*) and the Sitka Spruce (*P. sitchensis*) may be used for similar purposes. All three should be planted when between 1 foot and 2 feet in height.

SHRUBBY VERONICAS FLOWERING IN WINTER.

ALL through December, in suburban and country gardens alike, certain of the shrubby Veronics have been flowering in their full glory. So conspicuous are they in many gardens that they appear to command even more attention than

uncommonly well, showing to perfection and great naturalness not a few of the flowers grown. Happily, the setting is an ideal one, grass verge, tree and hedgerow mirroring into fullest life and beauty all that is best in these easily grown plants. Happily, too, among hardy and half-hardy annuals there is a choice sufficiently large to suit all gardens, their endless colour shades and variable heights only finding a parallel in the continuous flowering of the plants. Hence we may garden with the gayest and tallest of these flowers, or in smaller areas confine our efforts to the little-known, though not less beautiful, kinds which attain but a few inches high. Or we may garden with some of the more important or extensive families alone, some, like the Snapdragons

COLOURED PLATE

PLATE 1484.

GARDENING WITH ANNUALS.

IF among the readers of THE GARDEN there are any in doubt as to the value or possibility of gardening with annuals alone, they have only to turn to the beautiful coloured plate in the present issue to have their minds disabused on the subject for all time. Surely no greater evidence than this could be forthcoming, save that of the garden itself, which also, naturally, would pay higher tribute to colour beauty and good effect than is possible otherwise. Minus the garden, however, the coloured plate—the colour photograph of which was taken in the gardens of the Right Hon. the Countess of Eldon, Tilehurst, near Reading—plays its part

(*Antirrhinums*), that in Tom Thumb, intermediate and tall varieties are capable of affording great galleries of flowers tier above tier in a very remarkable way. Equally remarkable, too, is the fact—not sufficiently appreciated, perhaps—that in each of the sections named identical shades of colour are repeated. These come true from seeds, and are therefore reliable.

Of its importance we have on more than one occasion been impressed when looking through the trial grounds of Messrs. Sutton and Sons at Reading, from whose seeds, by the way, the flowers shown in the coloured plate were grown and by whom the colour photograph was taken, and it is recorded here for the benefit of those who would have their gardens aglow with colour for weeks on end at a singularly small cost. What is perhaps insufficiently realised in regard to annuals generally is not so much their cheapness or variety as, given certain conditions, their possibilities. For example, the Snapdragon is not strictly an annual, though its greatest garden value is only reached by treating it as such, sowing the seeds in warmth in early February to ensure a blaze of colour in July and August following, with other sowings in succession for later flowering. For borders similarly situated to that shown in the accompanying plate, a background might be formed by Sweet Peas in blue, white, scarlet, pink, cream and other shades. By arranging them in isolated, pyramidally trained groups, light and shade would be retained and informality secured. Following these might appear a broad belt of tall crimson Snapdragons, with another of white and a further one of pink of the intermediate class.

Fronting these might be arranged *Godetias* of distinctive colours, than which, perhaps, few plants are half so gay or so profuse in flowering. Then, should space permit and where fragrance is desired—and where is it not?—a broad belt of Stocks should be formed, to be followed again by a Tom Thumb *Antirrhinum* and, finally, a brilliant blue *Lobelia*. Some of these are so faithfully depicted in the coloured plate that they will appeal to all, and for the rest a few suggestions have been added. Where for some special reason a late summer and early autumn display is desired, the Chinese Aster is well worth considering. It is a great family—great in endless colour shades, flower form and varying height; hence of much utility. A fine attribute of the plant is that it may be transplanted almost at flower-time with impunity, so that, apart from specialisation, it is also a plant for the reserve garden, well suited to filling any blank spaces in the border where earlier-flowering subjects have gone before. Then why do not we make much more of brilliantly flowered plants, *Linum grandiflorum* and Tom Thumb *Nasturtiums* for poorest soils and stony banks, where they are most prodigal in flowering, and last, though not least, *Alonsoa*

Warszewiczii, a plant yielding sheaves of brilliant orange scarlet flowers that compel admiration? These are plants to garden with, since, while affording sheets of flowers, they also raise the annual to the topmost rung of Popularity's ladder.

E. H. JENKINS.

ANNUALS BY THE PATHSIDE.

AMONG the annual flowers of lowly stature these are many kinds well adapted for growing beside the pathways that intersect the garden, where



GODETIAS AND WHITE ALYSSUM USED AS EDGINGS TO A PATHWAY.

their beautiful colours, and in some instances delightful fragrance, can be enjoyed to the full. In the kitchen garden annuals are particularly serviceable for this purpose, because during the winter, when it is necessary to wheel manure on to the plots and do other heavy work, the plants have departed, and there is no possibility of damage such as there would be if perennials were used for the purpose.

There is one point, however, that always ought to be fully studied in making edgings of annuals, *i.e.*, a broad edging looks infinitely better than the narrow line that one too often finds doing service in gardens. The wisdom of a bold display is well shown in the accompanying illustration,

where, on the right, *Alyssum Carter's Snow Carpet* is forming an edging nearly two feet wide. The seed of this was sown where the plants are shown about the second week in April, and was first about a foot wide, the plants having spread, as already indicated, to nearly twice that distance by the following September, when the photograph was taken.

This is one of the best annuals for edgings, owing to its dwarf habit, delicious fragrance and long season of flowering. The plants illustrated commenced to bloom at the end of June, and did not cease until November was well under way. On the left is an edging of *Godetia Lady Satin Rose*. This grew rather less than a foot high and continued to flower over a long period, although not anything like the time that the *Alyssum* did. It will be seen that it was sown in a row about a foot wide and did not spread much. There are several other dwarf *Godetias* that might be successfully used for the same purpose.

The following annuals are all dwarf and make good edgings, though the flowers of some are rather fugacious: *Candytuft*, *Virginian Stock*, *Mignonette*, *Lepotosiphon hybridus* (should have a sunny position), *Nemophila insignis*, *Dimorphotheca aurantiaca*, *Silene pendula compacta*, *Phacelia campanularia* and *Saponaria calabrica*. H.

A COTTAGE HOME IN SOMERSET.

AMONG the counties of England, Somerset is one of the most varied, both as to scenery and geological structure. It has in one part high moorland, in others dense woodland and rich valley, with wide stretches of fertile alluvial land. Limestone, granite and coal are all represented, besides the well-known deposits of valuable building stone. The long coastline to the Severn Sea gives a certain mildness and humidity very favourable to vegetation, and many are the pleasant gardens attached to such dwellings of the cottage type as the one shown in the illustration on the next page, that, roofed with comfortable straw

thatch, nestle in the valleys, well sheltered by the wooded hills.

G. J.

A BEAUTIFUL CLIMBING ANNUAL.

IPOMŒA VERSICOLOR, sometimes known by the name of *Mina lobata*, is one of the most beautiful of half-hardy climbing annuals for summer and autumn decoration. The racemes of flowers, which are of a bright rosy crimson in the bud, afterwards turn to orange, finally changing to pale yellow, are borne in profusion at this time of the year. It is a very suitable plant for covering arbours, trellis-work, unsightly walls, or for trailing up sticks, providing it is in the sun.

THE SWEET PEA IN THE FLOWER GARDEN.

THE garden and decorative value of the Sweet Pea has been somewhat overshadowed by the special attention it has frequently received as an "exhibition" flower; and, while it must never be forgotten that it is owing to the zeal of exhibitors and the keen competition created by them that the raisers vied with each other in producing the exquisite varieties now grown, yet the

Soil and Position.—While the small gardener may not be able to have much choice of position, there is no soil, however poor, which cannot be improved. The most fertile soil is that whose mechanical condition is the finest. All garden soils contain a superabundance of plant food if only it is available, and thus the gardener can, by cultivation, do much to provide a soil in which the roots can have free action, and, given this, the Sweet Pea will flourish. If the soil be light and poor, then a liberal supply of farmyard, and especially cow, manure will help it, while deep digging and incorporating plenty of lime and mortar rubble,

Sweet Pea to the full in the flower garden. It is most effective when grown in clumps, and clumps are very suitable for small gardens. Of course, many people like a continuous row, and if arranged with special regard to colour blending, a delightful result can be obtained. Let me here state that a motley mixture affords me no pleasure; hence my strong advocacy of colour blending. The following twelve varieties, planted in a row, make a pleasing combination: Mauve, Tennant Spencer; white, Etta Dyke; deep cream pink, Constance Oliver; lavender, Florence Nightingale; cream, Clara Curtis; pale pink, Countess Spencer; blue



AN OLD THATCHED COTTAGE, WITH GARDEN, IN SOMERSETSHIRE.

Sweet Pea is first and essentially a "decorative" flower, and one which adorns with equal grace and beauty the garden of the cottage or the mansion, and also one that will thrive and produce a wealth of blossom in almost every kind of soil, and often in most unfavourable positions. The value of such a flower for those whose gardens and resources are limited cannot be over-estimated, and it is to such that these notes are mainly directed. Undoubtedly the "high culture" advocated by exhibitors has been a hindrance to the universal acceptance of the Sweet Pea as an indispensable item in every garden, and the high price of seed has also contributed thereto. These hindrances no longer exist,

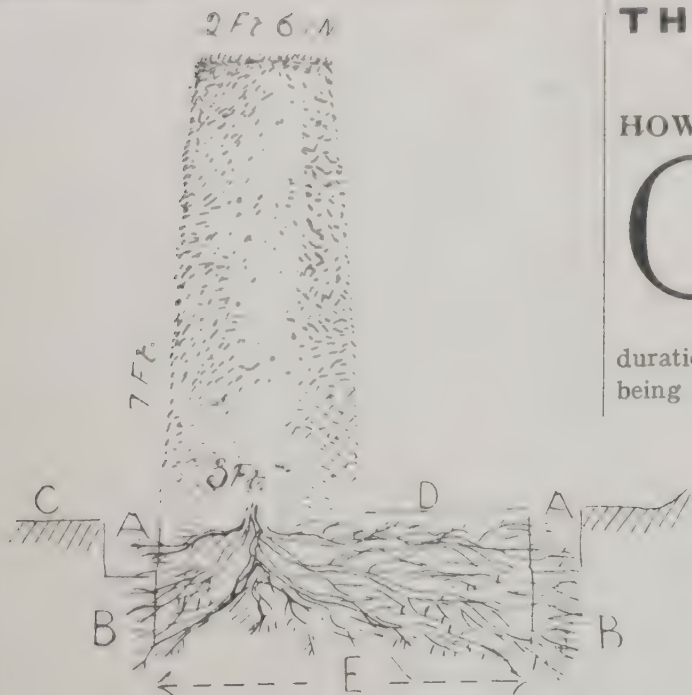
combined with winter frosts, will break up the heaviest of clays.

Preparing the Soil.—This work should be done only when the soil is in good condition. Deep digging and thorough cultivation are essential. It is wise to get the ground ready as early in the autumn as possible; yet it is far better to wait for a dry February than to attempt deep digging during wet weather.

Varieties.—For garden and decorative use, those varieties which by experience have been proved to be of sterling merit and not novelties should be grown. The small grower has now nothing to prevent him from utilising the

shades, Flora Norton Spencer; picotee (white ground), Elsie Herbert; crimson, Maud Holmes; lilac, Winsome; bicolor, Mrs. A. Ireland; and dark maroon, Nubian.

Sweet Peas in Clumps.—In this way the finest combinations and effects are seen. Plant in triangular form (five plants will make a clump), and some very beautiful results will reward the effort. Cream, lavender and pale pink; maroon, lavender and bicolor (Mrs. Ireland); mauve, white picotee and cream; crimson, white and blue; French grey, mauve and white—these and many other combinations which appeal to each individual can be had. The following excellent varieties can all be obtained



A YEW HEDGE AT BACK OF BORDER, SHOWING HOW IT IS TRIMMED AND ROOT PRUNED.

A, A—Narrow trenches 1 foot deep. B, B—The spade is thrust down on lines, severing all roots in its way. C—Flower border. D—Alley. E—Space in which the roots are confined.

THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

OPINION tends to the word "herbaceous" being used as a general term to include plants hardy and semi-tender, evergreen and suffrutescent, fibrous and bulbous rooted, of annual, biennial and perennial duration, the one requirement of importance being suitability for decorative gardening. At a not far distant date it required some courage to define a Lily or an annual Lobelia as herbaceous, and perhaps Dr. Samuel Johnson's definition "belonging to an herb," just as a herbaceous animal was one whose food was herbs, in contradistinction to a carnivorous or flesh-eating animal, gives the original meaning. Earlier than Dr. Johnson were "annuals, perennials and vivacious" plants, all now fitly comprehended in the one name—herbaceous.

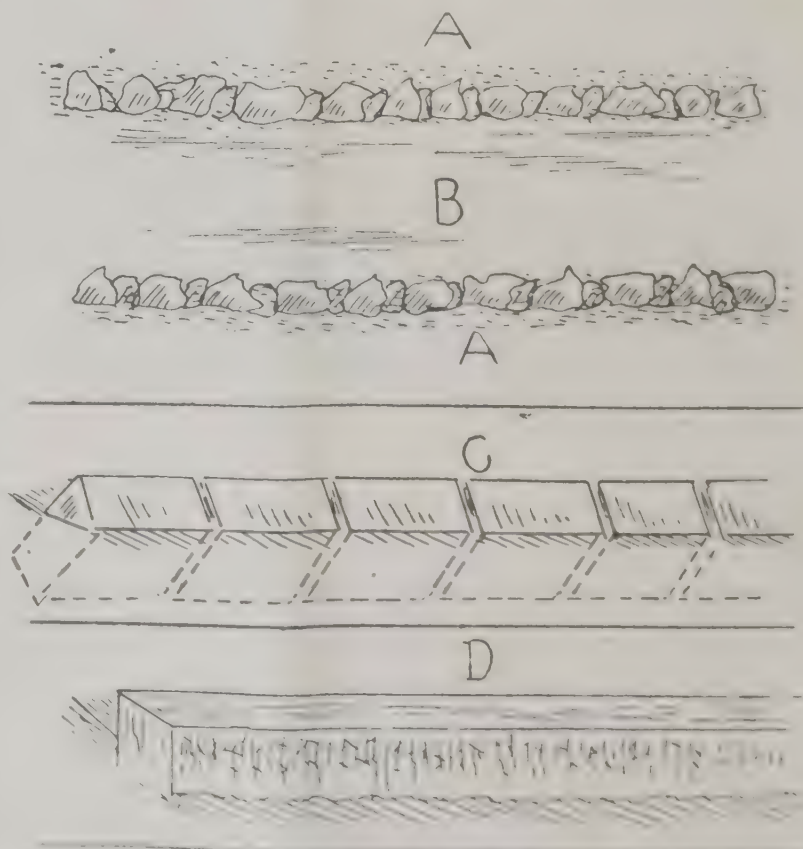
Somewhat similarly the herbaceous border has become the receptacle of a greater number of plants of

diversified characteristics than practitioners a century ago knew of. And it is to those who boldly introduced Dahlias, Roses, Sweet Peas, Pansies and other odds and ends of the vegetable kingdom into their borders that we are indebted for the breaking down of the wall of partition between the old-time strictly herbaceous border and the modern border and garden of all sorts. These remarks lead me to say that in the notes which follow there will be found no arbitrary botanical distinctions, so long as plants provide their quota of beauty of colour or of form, or both, that will be esteemed a sufficiently good reason to include them among herbaceous plants.

Position is of slight importance. Any exposure suits, but the plants flower earlier or later accordingly, and late-flowering species should never be planted where the chances are against them flowering at all. Shelter from wind is very important, and where there is none it must be provided. A wall is not nearly so protective as a tall hedge or living screen, which disintegrates the volumes of forceful air into minute and impotent particles, whereas the wind sweeps over a wall in gusts, which, swirling among the plants, twist them about confusedly. The wall itself ought, therefore, to be protected by efficient vegetation. In connection with shelter, that of a proper backing may be considered. The handsomest in summer is a tall trellis furnished with Roses, or with these and other climbers, the *corp d'œil* when these and the border flowers are all out being superbly fine. Frequently advantage is taken of shrubs, which also afford shelter. The fear of these robbing the legitimate occupants of the borders of food is very real to some people, but with care these need never offend. One way is to turn a narrow and deep trench at biennial intervals in the space between the shrubs and the flowers,

all the roots coming in the way being severed in the operation. Another method is to permanently divide the shrubbery from the herbaceous border by means of a narrow concrete wall sunk at least 30 inches into the ground. It need be no more than 3 inches thick, and the concrete one of cement to seven or eight of gravel or small stones. I am partial to Yew for a backing. It forms a remarkably close and warm hedge, is always neat and of a pleasing green, and in some states of the atmosphere is quite beautiful. The roots are kept within bounds in the way mentioned for trespassing shrubs, the method being shown in the accompanying sketch. The hedge needs trimming annually in July or August, and in some years also in spring, the beauty of its surface being enhanced by repeated trimming. A suitable height is 6 feet 6 inches to 7 feet, and 3 feet through, the sides having a slight taper, though not enough to be perceptible to the ordinary gazer. Thuja Lobbii makes a nice hedge, but not nearly so pleasing in the quality of greenness as Yew, and, of course, there are other plants, but none so proper as these. For a summer hedge Sweet Peas are very recommendable. Walls, to revert for a moment to these, may be of almost any height, a terrace wall perhaps only a few feet, and the border should not be wider than 7 feet or 8 feet, and, as a rule, no very tall plants used in its furnishing.

It is becoming usual to run a herbaceous border alongside one of the garden walls, which are generally 12 feet to 14 feet in height, permitting the employment of a great variety of climbers and others not exactly climbers, but which ask for the protection of a wall to succeed. I know of one garden in which Sweet Peas are trained up the wall, but this cannot be recommended for general adoption. Very high walls, along with ample ground space, provide splendid opportunities for bold planting for massive groups of Hollyhocks, Bocconias, Helianthus and such like. The border can hardly be too wide. Clematises do well on high walls, not only *C. montana*, but the beautiful hybrids also; and Banksia Roses love just such a chance to extend without a check. The old



EDGINGS FOR HERBACEOUS OR MIXED BORDERS.

A, A—Borders. B—Path. C—A brick edging. Bricks laid in concrete. D—A square-shaped box edging; important in formal gardening.

in cheap packets: Apple Blossom Spencer, Asta Ohn, Clara Curtis, Constance Oliver, Countess Spencer, Elsie Herbert, Etta Dyke, Flora Norton Spencer, Florence Nightingale, Frank Dolby, John Ingman, Maud Holmes, Mrs. Ireland, Mrs. H. Sykes, Mrs. C. W. Breadmore, Mrs. Townsend, Nubian, Tennant Spencer, Winsome and Lady Grisel Hamilton, Lord Nelson and Dorothy Eckford of the grandiflora varieties. It will be noticed that I have excluded all those varieties which require shading and protection from the inclement weather in order to produce their true colours, as such varieties cannot be classed "useful garden flowers." Of the Sweet Pea from the floral decorative point of view much can be written, as few flowers lend themselves more readily for the table decoration, the button-hole or the bouquet, &c., and to a Sweet Pea lover no present is nicer than a bunch of these lovely flowers.

The Sowing of Seed: Spring Sowing.—Space does not permit of a full treatment of the relative values of autumn or spring sowing, or of outdoor or indoor sowing. Suffice it now to say that the most satisfactory method for the small grower is to raise the seedlings in a 5-inch pot, which will well hold the five seeds of each variety grown. In January or February sow in good soil half an inch deep, with sufficient sand to keep the soil open. The seeds with whitish coats require more sand than the others, and less water, as they do not germinate so well and rot more easily. Place near the lights directly the seedlings appear, and give cool treatment until mid-April, when they can be transplanted into their permanent quarters.

Staking.—This subject will receive special treatment in a separate article shortly; but for the small garden, the tallest and twiggiest of Hazel sticks form the most artistic and satisfactory supports. During the summer keep the hoe going to check both weeds and evaporation, and rigidly use the knife in denuding the plants of every faded blossom before the seed pod can form. In this way the supply of blossoms can be continued well into the autumn, and the Sweet Pea will prove itself to be the Queen of Annuals, and one pre-eminently suited to small gardens as well as to those of the mansion.

S. M. CROW.

Queen of the Belgians is another estimable Rose for such a position.

Almost as important from an æsthetic point of view is the edging, or whether an edging should be provided. If the walk is grass or the border a part of a lawn, the question is, of course, settled in the negative; and where paved walks separate the border from other parts of the garden, there also an edging may be dispensed with. But pavement is at best a bald setting for flowers, and those who introduce it might well consider the simple method adopted by seventeenth century gardeners, which consisted of grass next the flowers and pavement in the middle part of the walk. Another still older way of dividing off the borders was usual up to the time of Henry VIII., and we read of its employment in Scotland at the same period. That was by means of a framework of wood, sometimes pales, sometimes openwork, as in "The Gardener's Labyrinth," and while its utility was unquestionable, its adoption to-day would open the way for novel methods of gardening not yet attempted. Bones, pebbles, bricks, stones and wood have all been used, and of these brick may still be recommended under certain conditions. Stones in the way of a rockery edging are not uncommon, but their use sometimes passes into misuse, which being walk and which border being difficult to determine. Some folks dislike Box, but undoubtedly of all live edgings it is the most suitable, being easy to keep in order, provided it is clipped at regular intervals, and always neat and of a pleasing green. There are a great number of varieties, some unsuitable. The best is that known as the Mouse Ear, a small-leaved, deep green, slow-growing form, which is common in Berwickshire. Those who want a taller-growing variety will find it in a Continental form which seems intermediate between the common and the dwarf Box. It is used here in an Old English garden, and I have seen the same variety also at Manderston, where it is used in the Italian garden. Box, I think, is best trimmed flat on the top, with straight sides, as shown at D in the sketch on the opposite page; but many have it rounded, and sometimes we find it cut triangular fashion. Thrift (*Statice Armeria*), *Gentiana acaulis*, Pinks, Daisies, Thyme and *Lychnis Viscaria flore pleno* are other plants suitable for edgings.

Prestonkirk, N.B.

R. P. BROTHERSTON.

(To be continued.)

WINTER TREATMENT OF LAWN TENNIS COURTS.

NOW that the playing season is over, the groundsman should at once set about renovating the worn-out parts, and where the turf has been subjected to so much wear and tear, fresh turf must of necessity be laid down. I am frequently called in to advise as to this work, and I must say I am surprised sometimes that the greenkeeper in charge should advise the importation of turf that is quite unsuitable for the purpose, as, when it is put down, its texture, compared with the other turf on the courts, is quite different, and during the whole of the next season, until it gets worn bare again, looks out of place, with the result that the court looks very bad indeed.

To remedy this I would advise all lawn-owners to, if possible, patch the bare and worn parts from the sides and ends of the ground outside

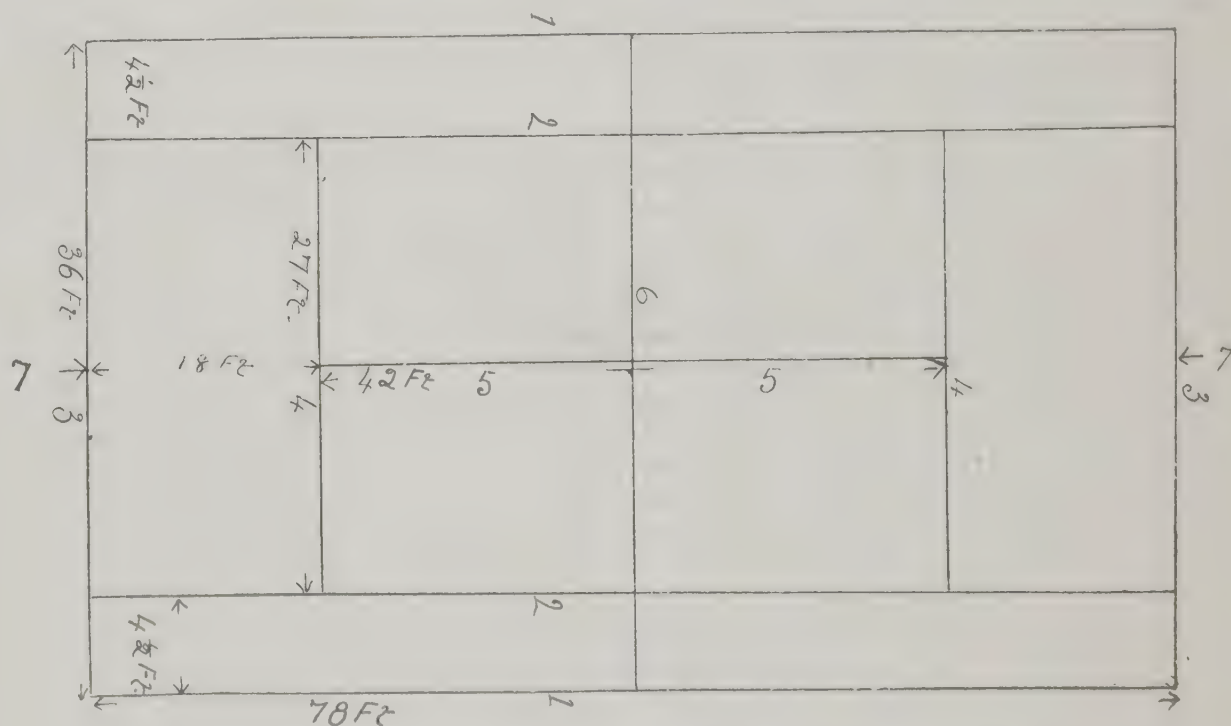
the playing area, and returf this part or sow down with turf as near as possible to the same texture as the court itself, as with careful attention this can be easily worked up during the season—as there is no play on it—to almost the same condition as the turf on the court. Another point in regard to this turfing of the ends, which must of necessity be done year after year, is this: the soil below must be removed from time to time and fresh soil substituted, otherwise, no matter how good the turf, the results will be found to be very disappointing indeed. This returfing should be carried out as soon as possible after the courts are closed for the season, so as to enable the fresh-laid turf to get well "knit" together for the next season's play.

All inequalities or hollows should be raised, and the best way to do this is by simply folding back the turf, not cutting it clean out, filling up to the desired level land replacing the turf again. By folding or rolling back the turf, the number of joints are lessened and a better job is made.

The Best Top-Dressing.—After this work has been carried out, the whole green or court should

tennis court, or, indeed, of any lawn, namely, mowing and rolling. I shall take the case of the mowing first, as I consider it the most important. There is a mistaken idea that if the grass is kept cut short during the winter months, the frost and cold will surely kill it. Now, I wish to point out that this is all wrong, and I strongly advise the mowing of the grass. When I say this, I mean that it ought not to be allowed to grow any longer than what it was in the playing season; in other words, keep it as close as possible and always mow when it requires it, as it will harden the grass, make it thicken out, and, when the playing season comes round, the surface will be a great deal more truer and firmer from the commencement. If, on the other hand, the grass is allowed to grow without being mown, it will get thin, and when the spring comes the greenkeeper has practically to set about doing his best to manufacture a new playing surface.

Rolling in Winter.—The other point is rolling, and this is hardly less important than the mowing. How often does one see, after heavy rain, the iron roller at work for all it is worth to, if you



PLAN OF SINGLE AND DOUBLE LAWN TENNIS COURTS.

1, 1—Side lines for double court. 2, 2—Side lines for single court. 3, 3—Base lines. 4, 4—Service lines. 5, 5—Half-court line. 6—Net. 7, 7—Run back at least 12 feet.

be top-dressed with a dressing of good mould (not sand) and well-rotted manure, mixed. This dressing should be well rubbed in, and on no account allowed to lie on the surface.

Worms in the Soil.—Remove all worms from the soil, as a true playing surface is absolutely impossible when they are allowed to burrow and throw up their casts all over the surface. By their removal a firm, true, clean and level surface is obtained, which could never have been got if they had been allowed to remain in the soil. It may, to some people, seem like heresy when I say remove the worms, as it has always been held that worms are the natural drainers of the soil, and that if they are removed the ground will become waterlogged and the turf die out; but this idea is all wrong, and I have proved it so. I strongly advise the removal of every worm if possible. The most effective, simple, safe and non-poisonous worm eradicator I have found is that supplied by Messrs. James Carter and Co.

Mowing.—I now come to a very important part of the winter treatment of the grass on a

ask, make a nice, smooth surface! A good piece of turf can very easily be ruined by the injudicious use of the roller, especially during the wet winter months. I have seen lawns and tennis courts—which I have been told a few years before were in perfect condition—that had got into a very bad state indeed, and this has nearly always been caused to a great extent through using too heavy a roller and also using it at the wrong time. Never, especially in winter, roll the grass with a heavy iron roller when the surface is wet, as it is simply ruination to the lawn. Keep the grass cut short, and roll when the surface is dry (not wet) if a good, clean piece of turf is desired. The foregoing hints are what I practise myself, and which I find the most suitable for what is aimed at—a true, firm carpet of turf.

PETER W. LEES (Greenkeeper).

Mid-Surrey Golf Club.

[We are often asked for the dimensions of single and double lawn tennis courts. The accompanying plan will, we hope, prove useful to those who are thinking of making new courts. Ed.]

HINTS ON PRUNING AND PLANTING GRAPE VINES.

EXPERIENCED cultivators usually prune their Vines at a given time year after year. Amateurs who have not had much experience in this work may be undecided as to how and when they should do it. The following brief hints will be of much service to them. The enthusiast who has had much to do with Vines will easily perceive the good quality of some of the buds and shoots on which they are borne, and be able to forecast, fairly accurately, the quality of the crop of bunches that will result the following year. Now, this knowledge will enable the cultivator to prune to the right "eye" or bud at the base of each shoot of the current year's growth. When

embryo bunch of Grapes, so that if the inexperienced cultivator will closely examine each branch before pruning and then prune judiciously, he will reap a good harvest of bunches. It is bad policy to leave three or four buds, as though they may, and very likely will, produce bunches, the latter will be loose and long-shouldered, whereas the bunches on shoots growing from the first or second basal bud will be compact in form and the berries colour better.

Young Vines require very careful treatment. Too often the amateur cultivator is tempted to leave the rods too long. If a young rod is now from 7 feet to 12 feet long, the cultivator should not hesitate to cut it back to 2 feet from its base. If so pruned every year the Vine is gradually built up and so fills the house, and there will be no loss of Grapes in the meantime. As many bunches as it will be advisable to leave on can be secured

pruned by the middle of January; but if the work can be done in the last week in December, so much the better, as there is very little risk of bleeding when the sap rises again in spring. The cut ends of branches pruned late should always be painted with knotting or styptic to prevent bleeding.

The Black Hamburg is a splendid variety for amateurs to grow. It is one of the best for general use. The Vine grows freely; ripens its wood early, even in adverse seasons; it is free in the production of bunches; the berries and bunches are large and well coloured when properly treated; and the flavour is superior to that of many other varieties. The Vine will succeed in a cool house, but deserves the assistance of artificial heat.

Hints on Planting Vines.—Amateur cultivators must not attempt to make very expensive borders. Thorough drainage is essential. If the subsoil is not gravelly or porous, a drain should be laid from it to the nearest outlet. In every case it is advisable to put in a layer, 9 inches deep, of broken bricks, and on them whole turves, grass side downwards, before putting in the main body of compost, which should be about two feet deep. Fibrous turves chopped into pieces about four inches square, with a pound of half-inch bones to each bushel, will constitute a good rooting medium for Vines. Feeding can be done at any time during the growth of the Vines and when they need nourishment. Borders may be made inside the house, outside the house, or partly inside and partly outside. In the latter case the Vines are planted inside and the roots allowed to permeate both the inside and outside border. If the space available for the border is 12 feet wide, it should be made up in sections 4 feet wide the first year, adding 2 feet each year afterwards. Very fine Grapes may be grown if the border is only 6 feet wide. The Vines should be planted in January. Carefully remove the soil and spread out the roots evenly, covering them with finer soil 4 inches deep and make the soil firm. Prune back the rods at once to within 18 inches or 2 feet of the ground level. During the



A FINE CROP OF BLACK HAMBURG GRAPES. NOTE THAT THE VINES ARE GROWN ON THE SINGLE ROD SYSTEM.

it has happened that the main basal leaves have been lost prematurely during the growing season, the buds have also lost much valuable support, and, instead of growing round and plump, they assume a pointed form and are not at all prominent. The round, plump bud generally contains an embryo bunch of Grapes, and it is quite safe to prune the branch back to that bud. The pointed, shrivelled bud rarely contains an embryo bunch of Grapes, and so it is unsafe to prune back to it—that is, to leave only that bud at the base of the branch—as if it is the only one left, there will be no Grapes the following year. The safe plan, in such circumstances, is to leave two basal buds. The one next to the old rod, or spur, as the case may be, will duly break and grow, but it must be rubbed out in due course when an inch long. The other bud, however, will very probably contain an

every year. Suppose, however, that, instead of cutting back the young rod as advised, it was left three parts or its whole length. When the sap began to rise in spring it would cause the few buds at the extreme end to grow while the others remained dormant. Under the treatment of an experienced cultivator this would not happen; but I am now referring to the way that an amateur without experience would find the new growths come. When only the top buds grow, a vacant space is left below, and in future years there would be an unequal disposition of side branches on the Vine rods. Do not cut too close to the buds. Leave quite half an inch of stem beyond the bud; also use a very sharp knife so as to avoid splitting the branch. It is well to hold the rod firmly with one hand while making the cut with the other. All Vines should be finally

year train up a leader and one shoot on each side of the Vine when the latter is grown on the single rod system. This system also requires that the Vines should be planted at least 3 feet apart. Let the new shoots grow slowly the first year, simply keeping frost out of the house.

It is not a wise plan to leave any bunches on the Vines the first year. In the second year a few bunches may be left to ripen, depending on the strength and vigour of the Vine rods. It is quite a mistake to overcrop a young Vine, for by so doing it is weakened in constitution at a time when its youthful vigour should be centred on building up a sound foundation for the heavy crops the rods are to carry for many years to come.

G. G.

GARDENING FOR BEGINNERS.

IVIES FOR LOW FENCES, RUSTIC TRELLIS AND SCREENS.



1.—CHAINS IN POSITION BEFORE PLANTING.



2.—IVY TRAINED TO A LOW RAILING.

THE common Ivy of our hedgerows and woods is familiar to all. The numerous and beautiful varieties grown in nurseries for sale are not so well known, as, unfortunately, there are some who regard the Ivy as too common to plant in gardens. The green-leaved sorts are the easiest of all plants to propagate from cuttings. Young shoots pulled off a wall or from an Ivy bank root readily in most soils. The orthodox method is to make cuttings 6 inches long and dibble them firmly in a prepared bed on a half-shaded border, 4 inches apart in the rows and 9 inches from row to row. The prettily variegated sorts root better in pots filled with sandy soil in a cold frame. This work may be done at any season of the year, October to January being the best time.

Where to Plant.—Ivies are the best of all evergreen climbers, and thrive in nearly every soil and position. Their value to form an attractive low fence, as a terrace boundary, or a dividing line between two parts of a garden, is well depicted in the illustrations. The Ivy is equally well adapted for clothing a rustic trellis, screen, and wooden or iron fence to secure privacy. The choice, weaker-growing sorts are often most effectively used on low terrace walls, while the vigorous varieties may be employed to clothe bare walls of buildings, particularly those having a northern aspect. Ivy edging, when kept neatly trimmed, forms an excellent margin to a shrubby border or a large bed on a lawn, while for clothing bare ground beneath trees and sloping banks the Ivy is unrivalled. The value and beauty

of the Ivy in our gardens depend to a very great extent on it being properly tended and trained. While Ivies will grow in most soils, the green sorts may be encouraged by manuring the ground previous to planting. To do this, however, to the choice variegated sorts seems to encourage them to revert to the green forms, which must, of course, be removed as soon as noticed. These beautiful variegated Ivies, it has been noted, make very good growth in soil containing old lime rubble and broken bricks. Though self-clinging when the plants become established, against a wall or fence a little training is necessary in the first instance. A few shreds and nails should be used to hold the shoots in position on the wall or wooden fence till the roots push out and fix themselves. It will be necessary to tie the young growths for some time to iron fences and low rails similar to those illustrated. It considerably improves the appearance of the stronger-growing green sorts if in April each year, just previous to new growth starting, they are closely trimmed back to the wall or fence with shears, removing many of the leaves and loose shoots. The plants certainly look rather bare for a week or two, but the beautiful fresh green appearance of the young leaves a little later far outweighs this. The training of the choice, weaker-growing variegated sorts is a rather different matter. From time to time the loose shoots, if required, must be fixed in position till the plants cover the allotted space, when they should be cut off singly with a knife. A low chain fence, such as that shown in the

illustration, can be completely clothed in two years if strong plants in pots are purchased for planting. It is quite a simple matter to erect one of these low railings or fences. Upright iron posts should be driven into the ground at suitable distances. Those shown in the illustration are 7 feet 6 inches apart; this may be increased to 10 feet if desired. The height of the posts above the ground may be 2½ feet to 3 feet, with a hook on the top of the posts on which to hang the chains. A second style is to have a straight rail, generally of barrel iron, instead of the looped chains, while a third method with two rows of Ivy is also illustrated. It is just a matter of taste which method is adopted; the Ivy will clothe all equally well.

A Useful Selection of Varieties is as follows: Green-leaved sorts: *Acuta* (*amurensis*), large, bold leaves; *canariensis* (the Irish Ivy), the best sort for growing beneath trees and fences; *dentata*, large, glossy or leathery green leaves; *Emerald Green*, a rich, bright green Ivy; *palmata* (the Five-fingered Leaved Ivy), a very nice variety; *sagittæfolia*, triangular or three-lobed leaves, very distinct; and *rægnieriana* (the Giant-leaved Ivy), very large, leathery foliage. Variegated sorts: *Angularis aurea*, leaves bright gold; *argentea variegata*, leaves margined and variegated white; *dentata variegata*, creamy yellow variegation; *digitata aurea*, golden yellow foliage; *flavescens*, bright yellow, small leaves; *Lee's Silver*, silver margin; *maderensis variegata*, broad silver band; *Mrs. Pollock*, yellow-blotched leaves tinged with red; *Silver Queen*; and *variegata elegantissima*, silver-edged leaves.



3.—SINGLE CHAIN MARKING A TERRACE BOUNDARY.



4.—A DOUBLE CHAIN CLOTHED WITH IVY.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Foreword.—In writing this calendar for the ensuing year, I will endeavour each week to give short reminders of work which should be carried out in as many branches of gardening as space will permit; but it should be remembered that soil and situation are important factors in gardening, therefore each cultivator should determine for himself how far such circumstances should affect his practice.

Fruits Under Glass.

Melons.—If ripe Melons are desired in May, a sowing should be made at once in small, clean pots and placed over a brisk bottom-heat. Protect the seeds from mice by sheets of glass. The temperature of the bed may be about 75°. When the young plants are through the surface, keep them as near the glass as possible. Eminence and Hero of Lockinge are good varieties for early sowing.

Pot Vines, to be of any value in saving the energies of permanent Vines, should be well advanced and showing their bunches. At this stage a night temperature of 65° should be maintained. Particular attention should be given to stopping the most forward shoots, so that an even spread of foliage may be secured over the trellis. Examine the pots several times daily and water with great care.

Early Permanent Vines.—When the shoots are fairly on the move, the Vines should be tied securely to the trellis. Delay in this matter will cause the young shoots to become drawn. When double breaks have been reduced and the bunches become prominent, the temperature may be raised to 65° at night, rising to 80° by day with sun. Maintain a moist atmosphere by damping the floor and walls several times daily.

Strawberries.—If not already done, a batch of the most forward plants should be placed in gentle heat. There is no better place to start these plants than a flat pit over a bed of leaves. The gentle heat produced by the leaves will encourage root action. The pit should be freely ventilated, or the foliage may become drawn. When the flower-spikes begin to push, the plants should be moved to a forcing-house with a temperature of 55° and placed near the glass.

The Plant-Houses.

Mignonette may be sown now for flowering in May. Three-inch pots are best for the purpose, as the plants can be potted into larger ones as growth advances. The soil may consist of three parts rich loam and one part decayed manure, and should be made firm before the seeds are sown. A temperature of 50° will suit them well.

Flowering Shrubs.—Lilac and other flowering shrubs intended for forcing should be potted at once. They may be put in some sheltered position and placed in heat as necessary. The same remark applies to bulbs which have been potted and placed in ashes.

Chrysanthemums.—Early struck cuttings should be removed from the propagating-pit as soon as they are sufficiently rooted, or they may become drawn and the prospect of a satisfactory result much reduced. As the flowering plants are cut over, a sufficient number should be placed near the glass in some cool structure, so that stocky cuttings may be produced. There should be no delay in taking the cuttings until the full stock has been secured.

Hardy Fruit.

The open weather experienced during the autumn has been all in favour of planting, which should be finished with as little delay as possible.

Apricots.—In planting young trees it should be remembered that over-rich soil frequently causes canker, and when once a tree is attacked by this disease, it is a difficult matter to restore it to health. Apricots should be planted in rather poor soil with plenty of old lime rubble, top-dressing the borders when the trees reach their fruiting stage. Established trees should be pruned without delay. Retain as much young wood as may be necessary to fill in the space on the wall, but the shoots should be cut back in proportion to their strength, so that young spurs may be produced regularly over the tree for next season's crop.

The Kitchen Garden.

Carrots in Pits.—A sowing of Stump-rooted Carrots should be made over a gentle hot-bed as early in the year as possible. Brick pits without fire-heat are best for this purpose, but protection from frost must be provided by covering the pits with Fern or other dry material.

Peas.—A small sowing of Peas may be made on a warm south border as soon as the state of the soil will permit. The seeds may be sown in deep drills and covered with 2 inches of fine soil.

Digging and Trenching should be pushed forward as quickly as possible while open weather lasts. It is a good practice to trench as much ground as possible each season, and if the weather is dry, the heavy ground should be turned up first, so that the soil may be exposed to the influence of the weather as long as possible.

The Flower Garden.

Herbaceous Plants.—There is no other class of flowering subjects which has grown in public favour in recent years like herbaceous plants, and none which will afford a greater profusion of bloom from spring until late autumn. The arranging of these plants must depend greatly on the situation, so that no hard-and-fast rule should be adopted. The ground in which they are to be grown ought to be trenched 2 feet deep, and if of a heavy nature a quantity of wood-ashes or decayed leaves should be mixed with it.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

General Work.—Early in the New Year much may be done in pushing forward such work as trenching, more particularly plots that are inclined to be heavy. Take advantage of frosty weather to wheel on manure and other refuse, so that it may be at hand when the weather permits of digging. On all occasions ground intended for Peas should be deeply trenched. This will prevent them suffering from drought.

The Seed Order.—No time should be lost in making up the seed order; it will save valuable time later, besides being much appreciated by the seedsmen.

Rhubarb and Seakale should be lifted, and allowed to remain on the ground until required for forcing. Three or four good-sized Rhubarb roots put in the forcing house from time to time will keep up a constant supply.

Hardy Fruit.

Planting.—Any planting still to be done should not be delayed, provided the soil is in a fit state; but if it is the least pasty, defer it until it dries, as it is a great mistake to plant in such soil.

Pruning.—The pruning and nailing of Apricots and Cherries should have first attention, as the buds will very soon be on the move. In the case of Apricots it will be well to put a double net over the trees; this will protect the more forward flowers, and it is more convenient to do this now while working with them. The pruning of standard and all bush fruit should be completed without delay. If one could afford the time, all fruit trees and bushes should be pruned immediately the fruit has been gathered. The reason for this will be quite obvious to all who have the least pretension to fruit-growing. In pruning wall trees, opportunity should be taken to cut away a number of spurs that have got out of bounds, and if a few are removed each year, it is surprising how soon a tree may be renewed.

The Flower Garden.

Trenching.—Borders devoted to annuals are better trenched two spits deep, and if a quantity of decayed vegetable refuse and mown grass collected from the lawn during summer is put in the bottom of the trench, it will assist in preserving moisture and also act as a fertiliser. Any dividing or planting of herbaceous plants had better be deferred until March. Should plants arrive from the nursery or from friends, it will be much better to place them in a cold frame, or, if they are very choice, place them in pots and protect from frost.

Montbretias.—In a great many districts, even in the North, Montbretias will stand out all the year. Last year I lost every bulb, whereas I had not been in the habit of lifting them. It will be well to run no risks, and to lift them, select the largest bulbs, and store them in an outhouse.

The Rose Garden.

Planting.—Roses may be planted up till March when the weather permits; but should the soil not be in a fit state for planting, when the bushes arrive they may remain unpacked, but kept in the matting until they are to be planted. Afterwards do not mulch with heavy farmyard manure. This is apt to keep the soil cold and wet; indeed, I believe we lose more Roses through this cause than from any other. A few pieces of Bracken or other dry material will be all that is necessary to protect them from frost.

Plants Under Glass.

Carthagens.—The greatest possible care should be exercised in watering at this season, particularly those of the Malmaison type. Over-watering at this time often leads to rust, which should be guarded against at all costs. Indeed, until about the middle of next month very little water will be required. Admit air freely, and only use fire-heat on damp, foggy days.

Carnation Rust.—Keep a sharp look-out for the Carnation rust, which makes its appearance at this season and spreads with alarming rapidity. As soon as any spots are detected, cut away the affected grass and burn it.

Cuttings of the Perpetual-flowering varieties should be inserted now. Better results will, in all probability, be obtained from cuttings rooted now than from those rooted earlier. For rooting I find nothing better than boxes filled with pure sand and placed in a house where there is a little bottom-heat. Should the cuttings be sturdy, they will not require to be covered with glass.

Late Chrysanthemums will still provide a fair amount of flowers, but provision must be made to keep up the supply. Place a few Azalea mollis and Lilacs into heat, and Freesias may be gently forced.

Cyclamen.—I know of no plants that give more satisfaction at this season of the year than some well-grown Cyclamen, the variety Salmon Queen being particularly attractive. Begonia Gloire de Lorraine will be getting over, and should be partly cut back and kept on the dry side for a time. Plants that have been used for house decoration are seldom much good for producing cuttings, and it will be just as well to do away with them at once.

Violets in Frames.—In unheated structures the greatest care should be taken in admitting air, and see that all decayed leaves are picked off and burnt. Keep pinching runners off, and stir the soil between the plants frequently with a hand-fork. I find a sprinkling of ground lime between the plants tends to keep them in a healthy, growing state.

Fruits Under Glass.

Peaches.—No time should be lost in completing the washing of the houses and trees and tying up the shoots, as the buds soon begin to swell with the increased sun-heat. In arranging the shoots, overcrowding cannot be too strongly condemned; 4 inches between the shoots will be a good guide. After attending to the border, finish up by giving the pipes a coating of lamp-black; it gives the house a much cleaner appearance, besides preserving the pipes.

Vines.—By this time most of the work in the vineries should be completed. Unless in the case of rods infested with mealy bug, the scraping of them, even with a blunt knife, should never be resorted to. All that is required is to rub off any loose bark with the hand.

Painting the Rods.—I know of nothing more effectual than a mixture of soft soap, sulphur and a little petroleum, mixed in boiling water, for this purpose. Brush this well into the rods and spurs with a stiff paint brush, which should destroy any eggs that may be lodged there; besides, this preparation is an excellent preventive in warding off red spider.

JOHN HIGHGATE,
(Gardener to the Marquis of Linlithgow)
Hopetoun Gardens, South Queensferry, N.B.

VEGETABLE SEEDS FOR
SPRING AND SUCCESSIONAL SOWING.

WITH such a host of varieties of vegetables it must be extremely perplexing to many, and especially to those who are amateurs, to decide which to select when preparing the seed order at this season; consequently a list of standard varieties, as mentioned below, and the time for sowing, with other particulars, may, I trust, be of some service to those who have not had the opportunity, as some of us have, of testing the varieties named. At the same time, I should like it to be clearly understood that some localities and soils are more suited to certain sorts than others, and, to a certain extent, common sense must be the guiding factor as to this; the same applies to the dates of sowing and the conditions of the weather and soil. It should always be borne in mind that it costs just as much to cultivate inferior varieties as it does the better ones, and though the initial cost of the seeds may be slightly more, the results will more than compensate for the extra outlay.

Preparation of the Soil.—It is of the utmost importance that the ground in all cases should be well drained and deeply and well worked during the winter and early spring. Light, porous soil is best trenched or deeply dug during the autumn and winter, while that of a stiff, retentive nature is better when worked in early spring. Everything should be done, as far as possible, to ensure a fine tilth by the time for seed-sowing. Though dates are given, it must not be assumed that it is imperative for sowing the seed strictly at such time. The weather, of course, has to be considered as well as the nature of the soil. It is far better to wait for two or even three weeks than to make any

attempt, especially on stiff, pasty soils, to sow fine seeds. At the same time, no opportunity should be missed for so doing. Probably the most common mistake made in relation to vegetable culture is sowing the seed too thickly; this is a fault which applies not only to the cottager and amateur, but very largely to professional gardeners. All sorts of excuses are raised for so doing; but, providing the soil is good, as it should be, I have never yet found a satisfactory excuse. It is a mere waste of seed, and overcrowding means in all cases unsatisfactory results. A golden rule, and one I have always tried to follow, is to sow just about as thick again as is needed, and thin to the desired distance as soon as the crop is practically assured.

GARDENING ACROSTICS.

THOSE entering for the acrostics must observe the rules published on page 607 of the issue of December 6, 1913.

DOUBLE ACROSTIC No. 5.

A beautiful hardy spring-flowering shrub whose shoots are wreathed, when well grown, with golden bells.

Firsts—Its generic name.

Lasts—A synonym of its more usual specific name.

1. The surname of the author of what is "perhaps the most beautiful of all herbals."
2. The hardiest Daisy Tree.
3. Once used as a charm; hence my popular name.
4. Not quite.
5. Sacred in the Flowery Land. Its colour and its name.
6. A charm—text and symbol.
7. The result of mating two species of the same genus.

8. "The King of Irises."

9. Hyacinthus non-scriptus. Why? What is supposed to be wanting?

Solutions of the foregoing must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C., not later than the first post on Saturday, January 10. Mark the envelope "Acrostic" in the top left-hand corner.

SOLUTION AND NOTES OF
ACROSTIC No. 3.

Firsts—"Ars Topiaria."

Lasts—La Fragonine.

*	1.	A	NDREW MARVEL	L
†	2.	R	E	A
‡	3.	S	ILVER LEA	F
§	4.	T	HOMAS TUSSE	R
	5.	O	LBI	A
¶	6.	P	OPERIN	G
**	7.	I	NDIG	O
††	8.	A	COR	N
‡‡	9.	R	HODANTHE MANGLESI	I
§§	10.	I	NULI	N
	11.	A	N AVENU	E

Firsts—The "Ars Topiaria" was introduced to Rome by Matius, the friend of Julius Cæsar. Part of the gardens of Pliny's Tuscan villa was so fashioned.—Johnson's "History of Gardening," pages 22 and 23. Lasts—La Fragonine. Differently-coloured Butcher's Broom has been lately introduced in France by M. Charles Moquet for decorating the garden in winter. * Andrew Marvell, 1621—1678. His earlier poems contain much information about the gardens of his day. Among others are "Upon Appleton House," "The Nymph and the Fawn," "The Mower Against Gardens" and "The Garden," of which this is the last verse. † John Rea, who wrote "Flora, Ceres and Pomona" quite in the style of a modern book on flowers without any references to the medicinal virtues of the plants he

Name of Variety.	When to Sow.	Where to Sow.	Distance between Rows.	Distance between Plants.	Aspect.	Soil.	When Ready.
Pea Gradus	March and April ..	Open ground	6ft.	2 to 3in.	Warm, sheltered border	Almost any	June and early July
Pea Duke of Albany	First week in April ..	" ..	8ft.	3 to 4in.	Any open	" ..	Middle of July
Pea Quite Content	Middle of April	" ..	10ft.	6 to 8in.	" ..	Good, rich soil	End of July
Pea Autocrat	May and June	" ..	7ft.	3 to 4in.	" ..	Almost any	August and September
Broad Bean Leviathan ..	February and March ..	Warm border	4ft.	4 to 5in.	South	Good, deeply worked	End of June and early July
Broad Bean Broad Windsor	April and May	Open ground	4ft.	5in.	Any open	" ..	July and August
French Bean Dwarf							
Canadian Wonder	Middle of May	Warm border	3ft.	6in.	South	Any	July
Runner Bean Scarlet							
Emperor		Open ground	10 to 12ft.	12in. ..	Any open	Good, deeply tilled ..	First to second week Aug.
Beet Globe	Early April	" ..	15in.	6in.	Warm border	Any	End of June and July
Beet Dell's Red	First week in May ..	" ..	16in.	9in.	Any open	Light to medium ..	Middle of August
Broccoli Michaelmas White	First week in April ..	Cold frame	3ft.	2½ft.	" ..	Any firm	September and October
Broccoli Christmas White	Second week in April ..	Open ground	3ft.	2½ft.	" ..	" ..	November and December
Broccoli Model	Middle week in April ..	" ..	3ft.	2½ft.	" ..	" ..	April and May
Broccoli Dwarf Green							
Curled	" ..	" ..	3ft.	2½ft.	" ..	" ..	Winter and spring
Brussels Sprout Dwarf							
Gem	Middle week in March	Cold frame	3ft.	2½ft.	" ..	" ..	" ..
Cabbage Ellam's Early ..	End of July	Open	2ft.	1½ft.	" ..	" ..	March and onwards
Cabbage Rosette	May	" ..	12in.	12in.	" ..	" ..	Autumn and winter
Savoy Drumhead	April	" ..	2½ft.	2ft.	" ..	" ..	" ..
Cauliflower Walcheren ..	Middle of September ..	Open, winter in frames	2½ft.	2ft.	Warm border	" ..	June
Cauliflower Magnum Bonum	March	Gentle heat under glass	2½ft.	2ft.	Any open	" ..	July
Cauliflower Early Giant ..	April	Open	3ft.	2½ft.	" ..	" ..	August and September
Carrot Early Nantes	March	" ..	10in.	3in.	Warm border	Light and sandy	June
Carrot New Intermediate	April	" ..	15in.	4 to 6in.	Open	" ..	Autumn and winter
Celery Invincible White ..	February to March ..	Gentle heat under glass	6ft.	12in.	Any open	Good, rich	August to November
Celery Aldenham Pink ..	March	" ..	6ft.	12in.	" ..	" ..	November to March
Leek Prizetaker	January	" ..	5ft.	12in.	" ..	" ..	Autumn and winter
Vegetable Marrow Moore's							
Cream	April	In heat under glass ..	12ft.	6ft.	Any sheltered, sunny ..	Any good, rich	July till frost
Vegetable Marrow Long							
Green	" ..	" ..	12ft.	6ft.	" ..	" ..	" ..
Onion James'	March, early	Open ground	12in.	4 to 6in.	Any open	Very rich	Autumn and winter
Onion Nuneham Park		" ..	12in.	4 to 6in.	" ..	" ..	" ..
Onion Globe Tripoli	Third week in Aug. ..	" ..	12in.	6 to 9in.	" ..	Any good	Late spring and summer
Parsnip Tender and True	February	" ..	18in.	10in.	" ..	Light and sandy	Autumn, winter and spring
Turnip Early Milan	March	Open	9in.	4 to 6in.	Warm border	Poor soil	Early June
Turnip Snowball	April to September ..	" ..	12in.	9in.	Any open	Any	12 to 16 weeks from sowing
Turnip Prizetaker	Aug. to Sept.	" ..	12in.	9in.	" ..	" ..	Winter and early spring
Tomato Sunrise	March	Under glass, in heat ..	8ft.	3ft.	Sunny, sheltered	Any poor	August and September
Potato May Queen		Open ground	2ft.	20in.	Warm, sheltered	Any good light	June
Potato Windsor Castle ..	April	" ..	3ft.	2ft.	Any open	" ..	August
Potato Up-to-Date	" ..	" ..	3ft.	2ft.	" ..	" ..	Autumn, winter and spring

EDWIN BUCKETT.

describes † A well-known disease affecting different kinds of trees. See Mr. Lynch's articles in *THE GARDEN* for November 22 and 29, 1913. § Thomas Tusser, who published in 1557 "An Hundreth Good Pointes of Husbandry," enlarged in 1573 to "Five Hundreth Good Pointes of Husbandry." || Lavatera Olbia Award of merit, Royal Horticultural Society, June 18, 1912. Pictured in Vol. XXXVIII., Part 2, of the Journal, and described by John Abercrombie in his "General System of Trees and Shrubs." ¶ Warden Pears and Popering Pears were two well-known varieties of Shakespeare's time. Leland was Rector of Popering.—Ellacombe's "Plant Lore and Garden Craft of Shakespeare," first edition, page 154. ** The Woad-growers of Germany gave indigo the name of Devil's Dye because it began to take the place of woad in dyeing.—Friend's "Flowers and Flower Lore," page 63. †† The cup of the Acorn is botanically called a cupula. ‡‡ Rhodanthe Manglesii is a pretty pink annual, often grown in pots. Its flowers keep their colour a long time when dried. A native of Australia. §§ As starch is stored in cereals and cane sugar in Beetroot, so inulin is stored in Dahlia tubers. |||| Repton was a celebrated landscape gardener of the "natural" school. He seems to have especially disliked formal avenues.—Cecil's "History of Gardening in England," third edition, page 258.

RESULT OF ACROSTIC No. 2.

In accordance with our rules, eleven marks were possible in this acrostic, one for each correct light and one for each correct "first" and "last." The following marks have been awarded:

Eleven marks.—Ernest Ballard, "Tortoise," "Mowgti," R. Chapman, "Shelah," "Penwarne," "Rusticus," "Scotia" and "W. R. D."

Ten marks.—"Ping," "Tentamen," Wm. Bond, "Tempus Fugit," L. Bigg-Wither, "Miller," "Hero," J. Coupland, "Elm," "Judith," G. Tolson, Miss G. H. Jeffreys, L. A. Loudon, G. B. Bassett, "Rustic," "White Lady," "S. W. P.," G. D. King, "Anna Olivier," "Nautilus" and Miss Marindin.

Nine marks.—"Jan," "E. C. F.," "W. J. W.," "Boarsvale," Miss E. A. Patch, "Westbank," "R. P. B.," "M. M.," A. Henderson, H. J. Giblett and "St. Kevins."

Eight marks.—"Briarbank," Wm. Acworth and "P. P."

Seven marks.—Mrs. Devenish.

Two marks.—Wm. Slocombe.

RESULT OF ACROSTIC No. 3.

According to our rules, thirteen marks were possible in this acrostic, one for each correct light and one for each correct "first" and "last." The following marks have been awarded:

Twelve marks.—"White Lady," L. A. Loudon, "Ping," "Hero," "Westbank," "Nautilus" and "Jan."

Eleven marks.—R. Chapman and "Boarsvale."

Ten marks.—"Elm," "W. R. D." and "Rusticus."

Nine marks.—"Miller" and Wm. Acworth.

Eight marks.—"St. Kevins," "Judith" and G. D. King.

Seven marks.—"Tortoise."

Five marks.—"W. J. W."

Four marks.—"Rustic" and Ernest Ballard.

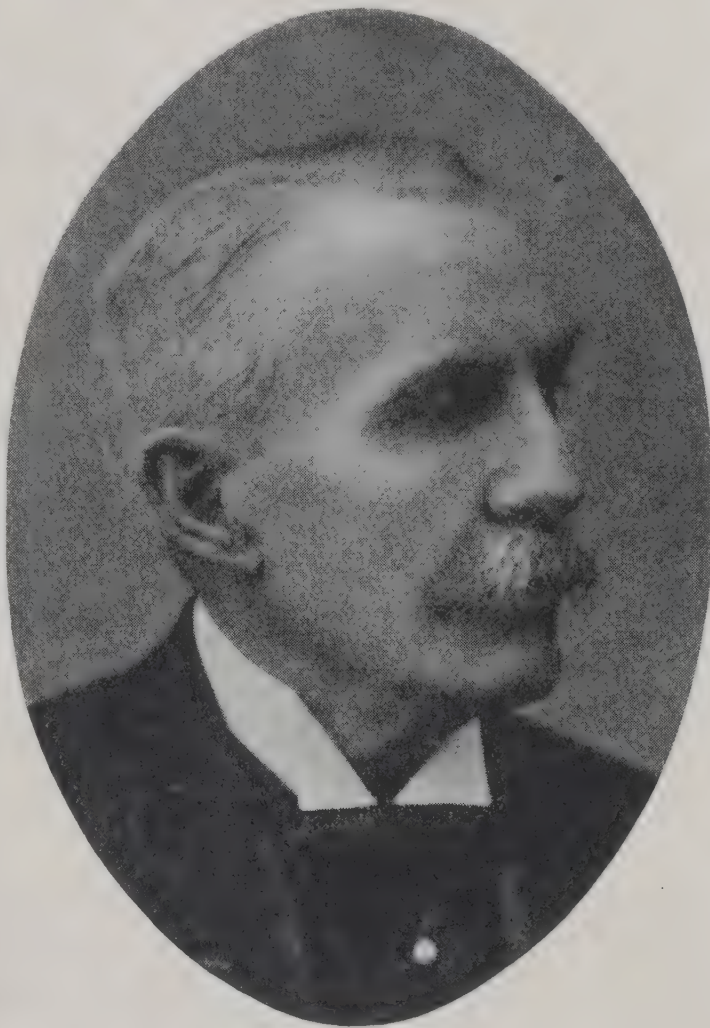
Three marks.—"Tempus Fugit," "Iris" and "Penwarne."

One mark.—"M. M."

OBITUARY.

SIR TREVOR LAWRENCE, BART.

It is with the deepest regret that we have to announce the death of Sir Trevor Lawrence, Bart., which occurred late on Monday night, December 22, at his residence, Burford, near Dorking. Sir Trevor was well known in horticultural circles, having for twenty-eight years acted as President to the Royal Horticultural Society, a position which he relinquished so recently as February, 1912.



THE LATE SIR TREVOR LAWRENCE, BART.

He was born on December 30, 1831, and was the only surviving son of the first Baronet, William Lawrence, Fellow of the Royal Society and Sergeant-Surgeon to Queen Victoria. Sir Trevor was educated at Winchester, and studied medicine at St. Bartholomew's Hospital, afterwards serving ten years in the Indian Medical Service, viz., from 1853 to 1863, which covered the period of the Mutiny. He was a Member of Parliament from 1875 to 1892, first for the Mid-Surrey Division and later for the Reigate Division. Sir Trevor always took a keen interest in hospital work, and for twelve years acted as treasurer to St. Bartholomew's Hospital. In horticultural circles he was one of the best-known personages of his day, and to his initiative and energy the Royal Horticultural Society owes not a little of its present prosperity. He was a great Orchid enthusiast, and his private collection was one of the best in the country. His genial manner endeared him to all those with

whom he came in contact, and by his death horticulture loses one whom it will not be easy to replace. We had the pleasure, by special permission, of dedicating the sixty-ninth volume of *THE GARDEN* to him. Sir Trevor leaves a widow, three sons and a daughter, to whom we tender our deepest sympathy.

The funeral took place at St. Michael's, Mickleham, on Saturday, the 27th ult. Among those present were Lady Lawrence, Sir William and Lady Lawrence, Sir Albert Rollit, Sir Jeremiah Colman, Bart., Lieutenant-Colonel Sir David Prain, Professor Bateson and Mr. Thomas McRow. A memorial service was held at Holy Trinity Church, Kensington Gore, on the same day. Among those who attended this service were the following members of the Council of the Royal Horticultural Society: Baron Bruno von Schröder, Sir Harry J. Veitch, Sir Daniel Morris, Messrs. Arthur W. Sutton, W. A. Bilney, E. A. Bowles, H. B. May and the Rev. W. Wilks (secretary). Mr. D. W. Thompson, representing the Royal College of Horticulture, Edinburgh, was also present.

W. COLLINS.

With deep regret we have to announce the death of the late esteemed secretary of the United Horticultural Benefit and Provident Society, which took place at 9 p.m. on the 21st ult. Mr. Collins underwent a successful operation for stricture in November, and was progressing favourably until about ten days before his death, when he contracted a chill and pleurisy supervened, the end coming quite suddenly and unexpectedly. Every expression of sympathy and respect was shown when the remains were laid to rest in Streatham Cemetery on Saturday, the 27th ult. The first portion of the Burial Service, which was most impressive, was conducted by the Canon at the Church of Ascension, Balham Hill, and thence to the Cemetery, where a large circle of friends had gathered to witness the last rites of their respected friend. Among the numerous and beautiful floral tributes which were sent was a magnificent harp with a broken string, "From the Members of the United Horticultural Benefit and Provident Society. A token of respect and esteem for our late Secretary, who for twenty-five years faithfully served the Society." Messrs. J. Wheeler, A. Stanbridge, E. Burge, T. Winter (treasurer) and A. C. Hill (secretary) represented the society.

JOHN MATTOCK.

It is with regret that we announce the death of the well-known rosarian, Mr. John Mattock of Headington, near Oxford. Mr. Mattock was a native of Bath, but moved to Headington about forty years ago, where he grew Roses with marked success. He was particularly successful in the cultivation and exhibition of Tea Roses, the soil of the neighbourhood being specially suited to this section. Mr. Mattock died on December 22 last at the age of seventy-six years.

BOOKS RECEIVED.

"The Four Gardens," by "Handasyde." Published by W. Heinemann, 21, Bedford Street, Strand; price 6s. net.
"The Herbaceous Garden," by Mrs. Philip Martineau. Published by Williams and Norgate, 14, Henrietta Street, Covent Garden, W.C.; price 7s. 6d. net.

THE GARDEN.

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JANUARY 10, 1914.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Our Special New Year Number.—We wish to thank the very many readers who have so kindly sent us letters of appreciation respecting our Special New Year Number, published last week. It is gratifying to know that our efforts are so widely and so warmly appreciated.

Mossy Saxifrages in Winter.—At the present time, when most of the occupants of the rock garden are looking far from happy, the brilliant green of the foliage of some of the Mossy Saxifrages is very pleasing. One of the best in this respect is *S. hypnoides gemmifera*, which spreads freely and forms a dense carpet of vivid green that contrasts well with the sombre hue of the rocks. *S. muscoides* and *S. decipiens Sternbergii* are two others that are very effective.

An Attractive Berried Shrub.—The majority of *Cotoneasters* are valued for their attractive fruits, which help to brighten up the garden during the autumn and winter. One of the most valuable for this purpose is *Cotoneaster affinis*, a deciduous Himalayan species often growing into a good-sized tree, when it is an object of beauty, bearing a large crop of fruits, which are an excellent substitute for Holly berries when there has been a scarcity of them, such as has been the case in some places this year.

Primula malacoides.—This charming little Chinese *Primula* is very highly appreciated, and is quite a feature in many greenhouses with its pale pink flowers. Although it may be hardy, in some districts it flowers so late that it is more satisfactory as a greenhouse plant, being well adapted for that purpose. It is quite easily grown, while its free-flowering habit and the time it remains in bloom, combined with the season of the year it flowers, make it a very valuable plant. The white form, although very pretty, can hardly be considered an improvement on the type.

Javanese Rhododendrons.—Unlike all the other *Rhododendrons*, the various garden forms obtained by the intercrossing of *R. jasminiflorum*, *R. javanicum* and other species, natives of the Malayan Archipelago, flower more or less continuously throughout the year. They are sometimes referred to as greenhouse *Rhododendrons*, but this is such an elastic term that it conveys but little. If a greenhouse is regarded as a structure from which frost is just excluded and nothing more, it will not be warm enough to do full justice to these beautiful flowers. They need a minimum night temperature of 50° to 55°, with a rise of 10° to 15° during the day; a fairly moist atmosphere is also necessary to their well-doing.

Hippeastrums.—These brilliant greenhouse flowers have been much improved in the hands of the hybridist of late years. The flowers most sought after are of good colour without the green base, and having the perianth so arranged

that the segments overlap one another without showing daylight between. The flowering bulbs should now be placed in heat and given every encouragement in the way of top-dressing and subsequent stimulants, in order that they will send up good, strong inflorescences.

Strawberry Fruits in December.—While visiting the gardens at Amberwood in Hampshire on December 17, we noticed many fine trusses of fruits in various stages of development on plants growing in the open borders. Many flowers were to be seen in various parts of the two large plantations, and on close inspection it was found that both spikes in flower and those bearing fruits were growing from side crowns or runners very close to the parent plants. Numbers of fruits were as large as Walnuts. The variety was *Royal Sovereign*.

Roses in Windy Situations.—After the frost experienced a week ago, it will be advisable to look over the Rose-beds, particularly in windy situations and where the soil is heavy clay. A day or two ago we noticed that a number of bushes had been blown about so much as to cause a collar of soil round the stem, and this was in some instances filled with water. The soil ought to be broken up and then made firm round the stem, and, if necessary, a stake put in to support the bush. Newly planted Roses will probably have been loosened by the frost, and where this is so, the soil must be made firm without delay.

The Sea Buckthorn.—Now that the berries of many hardy trees and shrubs have been devoured by birds, the value of the Sea Buckthorn, *Hippophaë rhamnoides*, is more fully appreciated. By the lakeside at Kew there are some large bushes covered with the translucent orange-coloured berries, which are very beautiful indeed when kissed by the winter sun. Although this is a rather slow-growing shrub, it is not fastidious as to soil and situation, but care must be taken to plant one male bush to about every eight or nine of those capable of bearing fruit, otherwise the berries will not be formed.

A Beautiful White-Stemmed Bramble.—At the present time the outer fringe of the garden, just where it merges into the woodland, owes most of its charm and interest to those shrubs with either coloured stems, fruits or leaves. In the first category we have Dogwoods, Willows, Brambles and several other kinds that might with advantage be more extensively planted for winter effect. A new Bramble from China named *Rubus giraldianus* promises to be particularly valuable in this respect. It sends up a colony of stout stems some 8 feet high, which are almost as white as driven snow, and as they are pendulous, a well-grown bush forms a very striking and beautiful feature in the landscape. In planting these coloured-stemmed shrubs it should be remembered that the best effect is obtained when a background of dark-leaved conifers or other evergreens is secured.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Arum Flowering Outdoors on Christmas Day.—

I thought it might interest some of your readers to hear that there was an Arum, or Lily of the Nile, in flower outdoors on Christmas Day at a cottage near here. The plants have been outside all the year round. They do not generally flower before April.—F. O'CONNELL, *Darrinane Abbey, Waterville, County Kerry, Ireland.*

Permanent Netting for Fruit Trees.—Those who suffer much from birds among the bush fruits (and who does not?) would do well to consider, if they have not already done so, the advisability of erecting wire-netting as a permanent protection. We did so here last year, with most gratifying results. In the vicinity of trees it is well only to enclose the break with 6-feet netting, and in the fruit season cover the top with good tanned netting, or else to have the overhead netting in span-roof form to throw off the falling leaves in autumn. The birds are most persistent round the sides. Last season, although we supplied water to the birds in saucers, we could not make one break of small fruits bird-proof, even with double tanned nets.—C. COMFORT, *Midlothian.*

Laurustinus lucidus.—One may pass through many a good garden and never see a bush of this beautiful shrub, with its handsome, polished foliage and large cymes, $3\frac{1}{2}$ inches across, of half-inch-wide, pure white blooms and rosy tipped buds. Its beauty has been conspicuous of late, for whereas it is normally a spring-flowering shrub, the unusually mild weather in November and early December has pushed it forward into a flowering state and the bloom has been perfect and abundant. It is a little tenderer than the other garden kinds, the hardiest being the Black Laurustinus that has [the handsome berries with the blue metallic lustre; but anywhere south of London it is likely to do well in a sheltered place. The whole growth is rather more free than that of the common Laurustinus, and, although the bloom is so much larger, it is a more refined flower and has also a certain kind of graceful port that is wanting in the more stiff and twiggy common kind.—G. J.

Peculiarities of Mistletoe.—Herefordshire being mentioned by "C. Q." on page 644, December 27 issue, as being favourable to the finding of Mistletoe in its orchards, gave me, as a Herefordian, an added interest in the reading of the article. May I ask if any reason is given, or can be suggested, why Mistletoe refuses to grow on Pear trees? assuming such to be the case. I happened to read an article in a contemporary last Christmas-time on Mistletoe, and the Pear tree was given by the writer as a tree upon which it had been found. But this may have been a mistake on his part. I cannot recollect seeing Mistletoe on a Pear tree anywhere; neither can my father, who has had much to do with orchards all his life; nor another Herefordshire fruit-grower of whom enquiries have been made since the appear-

ance of your article in THE GARDEN. In addition to the trees mentioned by "C. Q.," perhaps I may add the name of the Elm as a host of the Mistletoe, for it is to be found on this tree about ten minutes' walk from my parents' home.—C. TURNER, *Highgate.*

The Prophet Flower (*Arnebia echioides*).—*Arnebia* is an Arabian name applied to a genus included in the Natural Order Boraginæ and allied to *Lithospermum*. The species *echioides*, meaning *Echium*-like, is remarkable for its singular flowers. These are of a primrose yellow colour, with a purple, almost black, spot on the lobes of the corolla. The curious thing is that the dark spot gradually disappears in a few days. The botanist Müller long ago observed that many flowers of Boraginæ in the course of individual development seem to recapitulate the evolution



THE PROPHET FLOWER (*ARNEBIA ECHIOIDES*). THE BLACK SPOTS DISAPPEAR FROM THE BLOSSOMS AFTER A FEW DAYS.

of their colours, and he instanced this theory by the blue and violet species of *Myosotis*, *Anchusa* and *Symphytum*, which gave white and rose red varieties apparently by reversion to more primitive characters. Possibly the colour change in *Arnebia echioides* is due to the same cause, but it is worth noting that it is only as the flowers age that the spots disappear. Another theory, and one which seems more probable, is that the colour change may be an adaptation to show the more intelligent insects which are the useful and, incidentally, the unpollinated flowers. The illustration clearly depicts young flowers with dark spots, and older flowers in which the spots are fading away. By reason of its peculiarity this Oriental plant is popularly known as the Prophet Flower. It is a much valued subject

for the rock garden, and although difficulty is sometimes found in increasing the stock, this may be accomplished by taking cuttings of strong roots and inserting them in sandy soil in gentle heat. It may also be increased by seeds.—C. Q.

***Saxifraga brunoniana*.**—This is a distinct and beautiful Chinese novelty which, should it prove to be perfectly hardy, will be welcomed by all lovers of choice alpine. It is also a distinct addition to its genus. Quite early in the season the plant produces numerous thread-like stolons or runners, which in the fullest sunlight assume a brilliant red colour; hence it should be grown where so good an attribute may be seen to the best advantage. Later on in June and July the plant bears a profusion of golden yellow flowers. It is readily increased by layering the runner-like shoots.—E. J.

The Golden Mohur.—While glancing through the "Answers to Correspondents" in your last issue of THE GARDEN, I noticed the reply under the heading, "The Golden Mohur." If I am not mistaken, I think "G. D.," who enquired about it, means the Gold Mohur tree, *Poinciana regia*, and not what you suggested, namely, *Bassia latifolia* and *Quercus dilatata*. The Gold Mohur is a medium-sized ornamental tree with handsome feathery foliage and beautiful reddish orange flowers. I have seen this tree, which, by the way, is classed as a timber tree, doing very well in most gardens in the United Provinces, Punjab, and also some fine, graceful specimens in zoological gardens in Bombay and Karachi.—J. C. POWELL, *Ripley.*

November Hardy Chrysanthemums.

There are a great number of Chrysanthemums for the open garden in September and October, but the hardy kinds that are the most valuable are the ones that bloom in November, when outdoor flowers are very scarce. The late season, with its many mild weeks of early winter, has been especially favourable to them, and I have never before seen the deep red *Julie Lagravère* in such perfection. Are there more of this large Pompon class? My November bloom begins—sometimes at the very end of October—with the warm white *Sœur Melanie*; then comes the larger *Cottage Pink*, formerly grown indoors under the name of *Emperor of China*. It is quite hardy in all but

exceptionally cruel weather. It is much better out of doors, both as to bloom and leaf, for the flower has its full strength of colouring, from the pale, cool pink of the outer petals to the rosy crimson of the centre. The leaves also are of stout texture and take a fine colour, agreeing with that of the centre of the flower. Nearly at the same time comes *Julie Lagravère*, with its fine red bloom and very neat foliage. I have one other of these large Pompons—not a very good doer and nearly lost—called *Soleil d'Or*. The colour is a strong orange, shading to deeper in the centre; a fine, rich-coloured thing as to the flower, but with a lanky, ungainly habit. I wish I could hear of more of this class, beginning to bloom not earlier than the first week of November.—G. JEKYLL.

December Roses.—One can often find a few odd Roses in December in two years out of three, but I think it is very rarely that one can find a tree as full of bloom as is usual in June and July. I have lately seen a weeping standard of the variety Dorothy Perkins in flower in such profusion as to remind one of the month of Roses in a garden in Hampshire. The position was not a sheltered one, as the north and east winds had full play upon the tree. I think the most notable characteristic was the very deep, rich colour of the blooms—much more intense than flowers usually come of this variety earlier in the year.—G. G.

The Columbines.—Charming alike for house and table decorations and for the embellishment of the garden during early summer, the *Aquilegia* is worthy of more extensive cultivation. The long-spurred hybrids have been so improved upon of late years that they are certainly worth some consideration now that the planting season is with us. The best results are unquestionably obtained when a whole border or large bed can be given up entirely to these plants, for then enough of each colour can be used to produce an effective display. Should the position occupied by them be required bright in spring and autumn, bulbs should be planted at the same time. There is a host of subjects to choose from for early flowers, e.g., Tulips and Narcissi, and for a display when the *Aquilegias* have passed out of flower *Liliums* (such as *tigrinum*) or *Montbretias* would answer the purpose. Although not in any way fastidious about soil, the *Aquilegia* is seen at its best in a sandy loam.—H. TURNER, *Serlby Gardens*.

Buddleia Colvillei Flowering Outdoors on Christmas Day.—It is not often that one sees *Buddleia Colvillei* flowering freely, especially at this time of the year. There is, however, a plant of this *Buddleia* growing in the open border in these gardens, carrying a quantity of blossom and flowering shoots. On Christmas Day I counted over twenty flower-spikes fully developed, while there were a large number of the other branches whose flower-buds were just showing colour. It was planted about ten years ago, and has blossomed on three previous occasions, but never so freely or so late in the season as this. The flowers are distinct from all other *Buddleias*; they resemble a rosy red *Pentstemon*. The foliage is a kind of silver grey. It is a strong-growing subject, but, unlike the others, it does not flower until it has been established for some years. Growing in the same border as a companion to the foregoing *Buddleia* is a large bush of *Eriobotrya japonica* (the Loquat) in full flower. It has occupied its present position about twelve years, but this is the first time it has blossomed. It is generally seen planted against a wall, but it makes a magnificent bush in favoured situations. It prefers a rather light, loamy soil, and is readily increased by cuttings or layers.—F. W. RICH, *The Gardens, Elfordleigh, Plympton, South Devon*.

FORTHCOMING EVENTS.

January 13.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster.

January 22.—Gardeners' Royal Benevolent Institution's Annual General Meeting at Simpson's, Strand, London.

January 27.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster.

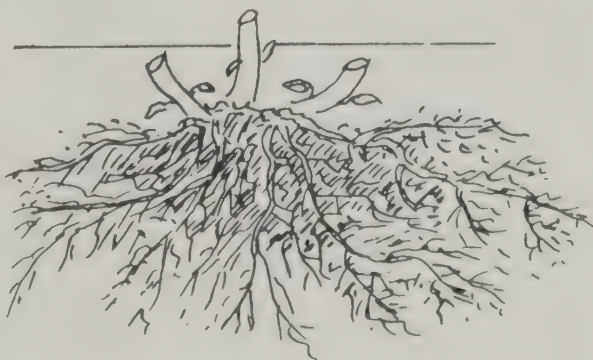
THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

(Continued from page 11.)

A MODERATELY light soil is suitable for the great majority of herbaceous plants. *Astilbes*, some *Lilies*, some *Irises*, *Helleborus major*, *Meconopsis wallichiana* and *Lobelia cardinalis* are examples of those which need a strong soil to be satisfactory, and even these may be induced to be fairly happy in a light soil, rotted manure and the soil made very firm about the plants going a long way to meet their requirements. But there is so large a variety of plants to choose from that, unless for very special reasons, those plants which will not thrive in the soil of a particular garden should be left out in the furnishing of borders.

Soil Pulverisation.—Under proper treatment any soil ought to improve year by year and become better adapted for all kinds of plants. Deep cultivation is, of course, of first importance; but deep cultivation is not of itself enough, and besides turning over the soil and loosening it, all clods should be smashed, thorough pulverisation having a remarkable effect for good. It is one of the points I insist on; yet so widely different do the individuals in a squad of men understand this cultural expedient that no two



PHLOX: SHOWING DEPTH TO PLANT.

ever break the clods to the same degree of fineness, and the effect is apparent the succeeding summer in the varying qualities of the crops. In bygone days it was usual to wait two or three years for a herbaceous border to come to its best, and I have frequently seen people look as if they did not credit one's word on being told the borders here were completely furnished the first season. It is true this cannot be done unless means are taken that the plants shall grow with vigour, and vigour cannot be acquired unless the soil is not only deeply worked and knocked about till it is reduced to fine particles, but also made rich in fertilising materials.

The Best Manure.—I quite agree it is possible to make soil—by the introduction of much crude manure—too stimulating, resulting in the production of soft and rank vegetation. The manure, therefore, should have been laid up for a long enough period to have lost much of its stimulating properties, when it may be employed abundantly without any but good effect. A combination of horse and cow manure is to be preferred to either alone, and all manures should be finely comminuted and mixed thoroughly with the soil, rather than dug into it in lumps in a haphazard fashion. In addition to this principal manuring, a layer of material prepared from old

Mushroom-beds, pigeon-manure, soot, wood-ashes, old composts and surfacings of fruit borders, with perhaps a slight addition of newly slaked lime spread over the surface of the border previous to planting, enables plants to make a vigorous start. A similar dressing is also beneficial if applied to established borders which have not for any reason been otherwise manured.

Drainage, while non-essential in many gardens, in others is all-important. It is not enough to place drainage material at the bottom of borders in the expectation that surplus water will be removed in that way, for unless a proper drain is provided to carry away the water, the above expedient will simply make matters worse, inasmuch as it will be the means of drawing into it moisture from both sides without drying and warming the border itself. If the border is not more than 15 feet in width, one drain down the middle will form a sufficient water remover.

The Ideal Management of a herbaceous border, as regards the soil, is to lift the plants annually, cultivate, rearrange, and replant. Usually two or three years elapse between these overhauls, but at least some of the more aggressive plants should be lifted annually, the ground evacuated, cultivated, and the plants rearranged. It is very important that species of *Aconitum*, *Helenium*, *Helianthus*, *Aster*, *Chrysanthemum maximum*, *C. uliginosum*, *Rudbeckia*, *Senecio tanguticus* and others of a like nature should be treated thus annually. *Montbretias* also yield so much better results that it is worth while to include these among the annual plantations. There are so many good things among these that it is possible to secure a different effect by rearranging these alone in another way. I know there exists a kind of horror at the thought of intruding a spade among established herbaceous plants, the dear roots being objects of much concern lest any should be severed. May I express the conviction that nothing better could happen to the plants next to lifting and replanting. By digging deeply and carefully among them they are divested of useless roots and an improved root-run is provided, into which new roots to take the place of those removed quickly find their way, to the great benefit of the plants. Manure about twelve months old is best fitted for mixing with the soil under these conditions.

Lifting and Replanting.—On occasions when the borders are completely renewed and cultivated, I have found it much the best way, in order that planting may not be stopped by wet weather, by which operations are sometimes delayed till spring, to lift only a few yards in advance, rearrange as each short section is recultivated, and plant it up at once. It perhaps needs experience and a clear conception in one's mind of the ultimate appearance of the border as a whole to proceed on these lines, but it is the most satisfactory on the whole. The soil ought to be dry enough to permit of the plants being well firmed after planting, and the unoccupied parts also compressed so that the ground will not sink unevenly during the winter. The end of October and part of November is the period when I plant, but some things which are apt to flower early may well be left till spring, one result being a decidedly later bloom. Where *Gladioli*, *Carnations*, *Pentstemons*, *Celsias*, *Snapdragons*, *Chrysanthemums* and annuals are employed, it is incumbent that vacancies should be left for these.

Prestonkirk, N.B.

R. P. BROTHERSTON.

(To be continued.)

FRAGRANT-LEAVED TREES AND SHRUBS.

LITTLE attention is given to the small group of trees and shrubs characterised by their fragrant leaves, yet such have a peculiar charm, and in some instances perfume the air quite as much as do numerous fragrant flowers. They belong to both evergreen and deciduous species, and in almost all instances the perfume is due to the presence of essential oil secreted in small glands in the leaves. In many cases these oils are important articles of commerce, and a considerable number of persons find employment in separating them from the leaves by distillation, to be used largely for perfumery. We have, however, to consider the plants wholly in their relationship to the garden at the present time, their commercial possibilities being of secondary importance. In some cases the fragrance is easily liberated, and is very noticeable after a shower of rain or during early morning while the leaves are still covered with dew; but in other instances the perfume is only released by brushing or bruising the leaves. During the winter it is only possible, of course, to observe the fragrance of the evergreen kinds; therefore we will glance at a few of those first. Noteworthy among the number is the

Sweet Bay (*Laurus nobilis*), a fine evergreen which sometimes grows into a tree 30 feet or 40 feet high in the milder parts of the country, but is more frequently found as a large bush. Its fragrance is most apparent when the leaves are rubbed. There are two small-leaved varieties, *angustifolia* and *undulata*, which are equally fragrant. The leaves of the Bay are often used for flavouring purposes.

The Myrtle (*Myrtus communis*) is another charming, fragrant-leaved shrub, as is also its small-leaved form, *M. tarentina*. In the South-West Counties they thrive as bushes in the open ground, but in other parts they must have wall culture.

The peculiar resinous odour of many coniferous trees is usually highly appreciated by visitors to woods or plantations of Pines, Cypressess and Arbor-vitæ, for although lacking the sweetness of the Bay and Myrtle, and sometimes becoming rather pungent on close investigation, its invigorating action makes it very popular, particularly with invalids. Turning from large-growing trees to small shrubs, we find in the diminutive

Thymes worthy examples of fragrant-leaved shrubs. They are delightful when planted between the stones in unevenly paved paths, for, when passed over by ladies, the rubbing of their dresses causes sufficient agitation to set the fragrance free. The writer once saw these plants used with considerable effect in the manner

described in a Somersetshire garden. They may also be used effectively on walls. *Thymus* *Chamaedræ*, *T. citriodorus*, *T. Serpyllum* and *T. vulgaris* may all be used. Another humble plant may be found in the

Sage (*Salvia officinalis*), for its leaves are quite fragrant enough to warrant its inclusion in our group.

The Rosemary (*Rosmarinus officinalis*) is very popular on account of its delicate scent. The fragrance of the flowers is, however, more noticeable, that of the leaves not being very evident until friction has been applied. Similar remarks apply to the

Lavenders (*Lavandula spica* and *L. vera*), both of which should be included among fragrant-

Sweet Briar (*Rosa rubiginosa*), which, with the Penzance Briars, scent the air for a considerable distance, especially during early morning and after rain. In the warmer parts of the country the

Scented Verbena may be requisitioned. This, *Lippia citriodora*, has Lemon-scented leaves and forms a bush 3 feet to 6 feet high. It is hardier than is often thought, and may be grown in sheltered positions in the Southern Midlands. If placed against a wall further North, it will also succeed. The genus

Artemisia provides a number of scented-leaved shrubs, notably the Southernwood (*A. Abrotanum*), *A. arborescens*, *A. procera* and *A. tridentata*. The latter plant is also worth attention on account of its silvery leaves. In Cornwall and the Scilly Islands a number of the

Eucalypti may be grown. The most fragrant, probably, is *E. citriodora*, which, unfortunately, is also one of the most tender. Throughout most of the Southern Counties, however, *E. globulus* can be planted. Its ornamental leaves emit a perfume when rubbed. Southern Cornwall and the Scilly Islands have a wealth of fragrant-leaved material in the scented-leaved *Pelargoniums* from South Africa. In the Scilly Islands they grow luxuriantly, and when overgrowing their space they are simply chopped down and allowed to break again from the ground-line.

The Myricas or Wax Myrtles have fragrant leaves, but as a rule they are not of any great decorative value. The most ornamental is *M. asplenifolia*, a native of North America, with elegantly cut leaves. It requires moist ground and a rather cool situation.

Although these do not exhaust the list of fragrant-leaved shrubs, a sufficient number has been mentioned to direct attention to a group of plants which is usually given scanty consideration. D.



HERBACEOUS FLOWERS IN A SUSSEX GARDEN.

leaved shrubs. A more vigorous shrub is found in *Umbellularia californica*, sometimes called the Californian Laurel by reason of its leaves having a somewhat similar perfume to that of the Sweet Bay, or Bay Laurel as it is sometimes called. The various *Linderas* and *Litsæas*, though not showy shrubs as a rule, bear fragrant leaves. These, with *Laurus* and *Umbellularia*, belong to the Order Lauraceæ, an Order peculiar by reason of the large number of genera of fragrant plants it contains. In some instances, as in the Camphor, the fragrance is found throughout the wood, and the wood is distilled in order to obtain the essence. One of the most popular fragrant-leaved shrubs during the summer is the

and blue, are mingled with the nodding flowers of the Japanese Anemones, both pink and white, while the warm orange shades of the *Montbretias* lend a pleasing tone of colour in the foreground. Another garden flower used in the foreground, and one which has become exceedingly popular of late, is the Caucasian Catmint (*Nepeta Mussini*). It forms a dense prostrate tuft with numerous spikes of small lavender-blue flowers; as an edging to the flower border it has few equals. Of the *Michaelmas* Daisies, the rose pink variety *St. Egwin* and the large blue *Climax* are extensively used for colour effect, and both varieties stand out well against the wall and balustrading, which are partially clothed with wall shrubs in the background.

PLANT GROUPING FOR EFFECT.

THE accompanying illustration depicts an autumn scene in the gardens of Paxhill Park, Sussex. Herbaceous flowers are here used with telling effect. *Michaelmas* Daisies, in tones of pink, lavender

SEASONABLE NOTES ON VEGETABLES.

Trenching.—Of all details in connection with vegetable culture, none is of more importance than trenching. Apart from providing a deeper root-run in which the various kinds of vegetables will search for food—for instance, an Onion will send its roots down over two feet deep—the action of trenching warms the soil by the admission of air. Vegetables of all kinds resist drought so much better during the summer in trenched ground. There is still another advantage in trenching to note. Where the subsoil, perhaps 1 foot to 2 feet deep, is clay, or nearly so, a stiff, heavy, hard pan at the bottom of the ordinarily dug soil prevents the quick percolation of water from heavy rains. This excess of moisture immediately under the roots causes stagnation in growth.

There are various methods of trenching. Some advocate bringing the bottom soil to the surface, no matter how deep they trench. Under certain conditions this is the most effective manner of bringing the whole of the soil into an improved condition quickly. The reservation is this: If a quantity of matter like decayed vegetable refuse, old potting soil, roadside refuse, with the addition of quicklime, all mixed together, is available to cover the surface 6 inches thick, to give whatever crop may be grown a quicker start into growth than would be the case if the subsoil brought to the top was clay or a heavy, retentive soil approaching clay. If the soil is treated in this way for one or two years, then retrenched again, we get a medium that will grow almost any kind of vegetable well. If, on the other hand, such addition is not available, I advise the keeping of the surface soil in the same position, and trusting to the addition of long, strawy manure or freshly gathered leaves to the lower trenches during the operation. This method of trenching entails the use of two trenches, whereas the former needs but one. In any case, I advise that all stiff soil be broken up to the depth of 3 feet, and in all cases deeply dig the bottom of each trench, leaving this in a rough state. This method of trenching may seem a laborious matter, but it is an excellent plan, and when once well done it will last a long time and so improve the conditions for vegetable growth that it is time well spent.

Exhibition Onions.—The first or second week in January is a good time to sow the seed. There is no better variety than Ailsa Craig from a good strain. The seed should be either home saved or obtained from a reliable seedsman. This variety possesses all the attributes of a good Onion—size, shape, early maturity, long keeping, and a vigorous constitution. The ordinary Geranium cutting boxes, 4 inches deep, answer well for sowing. Place a few crocks at the bottom, covering these with rough leaves, and fill the boxes to within half an inch of the top firmly with a compost of loam, leaf-mould, decayed Mushroom-bed manure, and sufficient sharp sand to make the whole gritty. Select large and plump seeds,

sowing them regularly an inch or so apart. Cover the seeds lightly, yet firmly, with similar compost finely sifted. If the soil is not sufficiently moist, give a gentle watering and place the boxes in a vinery or Peach-house just started, where the temperature is not less than 55° or 60°. Directly the plants appear above the surface, the boxes should be placed in a light position close to the glass, to prevent the plants becoming drawn.

Broad Beans.—No time should be lost in making a sowing of Windsor or Longpod on a sheltered border or in a favourable position in the open. Well fork over the site, leaving it light below and thus drier. In a trench, 4 inches deep, spread some light compost on which to place the double row of Beans angle-wise, covering them lightly with the same compost, to be increased as the plants push through the soil, which not only aids growth, but protects them also from birds, slugs and bad weather.

Seakale.—When the roots are lifted for forcing, the next season's crop should be considered, taking care of the small roots about six inches long,

Even in the depth of winter it retains its beauty, spreading like a silvery carpet close to the ground and making a pleasing contrast with dark green Ivy if the latter is grown in the background. There are other Santolinas of hoary appearance, such as *S. incana* and *S. squarrosa*, the former a small, silvery shrub suitable for the rock garden, and the latter a variety of the Lavender Cotton well suited for carpeting banks. The *Cerastium*, common Lavender and garden Pinks are other grey-leaved plants that are appreciated for their winter effects, while in summer we have many others, of which *Cineraria maritima*, *Antennarias* and *Stachys lanata* are perhaps the best known.

TWO INTERESTING BELL-FLOWERS.

CAMPANULA EXCISA AND C. ZOYSII.

I THINK the reason why the rare *Campanula excisa* so universally fails in cultivation is that it gets



THE GREY-LEAVED LAVENDER COTTON (*SANTOLINA CHAMÆCYPARISSUS*) IN MIDWINTER.

of the thickness of a cedar pencil. Tie them in bundles and place them in sandy soil in quite a cool place. Put fresh roots as required—a few at a time is best—in the various places for forcing. Nowhere is better than in a Mushroom-house, where blanching is perfectly done in the dark, moist atmosphere, and where a genial heat is maintained for the benefit of the Mushrooms. Cover the crowns with clean, freshly gathered leaves, which aids growth and ensures perfect blanching. If no Mushroom-house exists, a deep box, placed on the top of the brickwork over the boiler in the stovehole will suffice, if the crowns are covered with leaves, kept moist; or an inverted flower-pot over another with the roots in, stood on the hot-water pipes in the greenhouse, will suffice.

Swanmore Park, Hants.

E. MOLYNEUX.

SILVERY LEAVED PLANTS.

ONE of the most beautiful of all garden plants with silvery grey foliage is the Lavender Cotton, botanically known as *Santolina Chamæcyparissus*.

so pitilessly cut to pieces by propagators that its poor little relics are ultimately unable to make headway. Properly rooted, however, in sound masses, I believe there should not be any difficulty at all, whether in sun or shade, about growing *C. excisa*, so long as it is remembered that hitherto (one must never be prophetic: *C. alpestris* has weakened to lime, so why not *C. excisa*?) *C. excisa* remains *ex hypothesi* firmly opposed to any suspicion of lime, and also, as I think, to any heaviness of soil. For the first time I studied this plant last year *in situ*; it is very clearly a perfectly easy and robust species. For, though extremely rare, it is also extremely common and pervasive; confined to the northern and southern sides of Monte Rosa (with one outlying station, at least, in the Engadine), it is there universal, taking the place of *C. pusilla*, from the river-beds close on Macugnaga, through the thinner Larch slopes, up to the shingles by the Belvedere Glacier, where it forms masses of colour a yard and more across. Here it is evidently in its fullest glory; thus

growing, tube-flowered in open earth, it grows ample and profuse, in wide tussocks, from the pure granitic sand among lumps and boulders of granite. It is finer and wirier and more graceful than *C. pusilla*; at the same time, not so far removed in general effect but for the more violet note of the blossoms and their extraordinary little punched-out hole at the base of the corolla segments. The blossoms, however, vary in form; those usually (and so rarely) seen in cultivation are a trifle starved looking and mean, but search among the plant at its happiest soon produces one variety with splendid opulent blossoms, plump and comely in outline. There are pale variations, too, and a pure albino. To this I was fully directed; I duly found all the points of direction, found the spot—found everything except the white *Campanula*. Now, soundly rooted, I see *C. excisa* sprouting freely everywhere; in one garden I know it now has to be “hyked” up by handfuls, like a weed, and cast away. There it is growing in a very rich mixture of leaf-mould and coarse sand, with a perpetual flow of underground water. With me, on the contrary, it has not seemed to enjoy the sandy part of the water-bed especially made for its needs, but is thriving very freely in a drier and lime-fraught portion where I cannot remember that it was ever put. And finally, it has a habit of dying down and then coming up again a few weeks later quite unperturbed by the alarm it has caused to its cultivator, who is quite prepared for its winter disappearance underground, but is rendered unhappy by such unexpected games of “Peep-bo.”

Campanula Zoysii.—Why are cultivators, in THE GARDEN or elsewhere, warned to be afraid of this easy and hearty little species? One might as well be nervous about *C. pusilla*! A possible reason is that gardeners oftener fail with *C. Zoysii* because, being so much rarer, it is subdivided beyond its strength by nurserymen, and sent out in no fit condition to battle with a slug-ruled world. Otherwise, *C. Zoysii* is a species no less hardy and hearty than *C. pusilla*, though incomparably rarer. Many enthusiasts who have successfully grown *Campanula Zoysii* cherish it above all others. It is a limestone species of the Eastern Alps (Karawanken, &c.), where it not only occupies the high, hard chinks, like *C. Raineri*, but also gives notice of its adaptable temper by descending far down into the river shingles, where it forms immense masses more than a yard across, very unlike the tastes or developments of *C. Raineri*. There, in stony sand, it waxes hugely, but seems to flower so late that on August 24 of last year hardly a bud was open. Now, in my garden, collected plants of *C. Zoysii* (small pot plants in spring) are 6 inches tall and even more across, with sheaves of their lovely little odd puckered flowers, blue and whitish, like stoppered bottles. They are growing in light, rich loam, plentifully mixed with lime rubble, and with water percolating beneath; and here it

is quite evident they mean to wax fat and spread like *C. pusilla*, without any question of difficulty or care—except in connection with slugs, which greedily devour them. *C. Zoysii* does not seem to vary much in colour, except in the case of the wonderful pure white albino, which I purchased for vast sums from its possessor, and which has rewarded me, accordingly, with flowers of a much richer blue than the type. REGINALD FARRER.

A BEAUTIFUL HARDY PRIMULA.

PRIMULA PULVERULENTA MRS. BERKELEY.

This variety is sure to be a warm favourite when better known. The type, *Primula pulverulenta*,



PRIMULA PULVERULENTA MRS. BERKELEY GROWN FROM SEED.

a fine sturdy species with showy ruby crimson flowers, and flower-stems thickly coated with a white farina, is too well known to need further description. The variety Mrs. Berkeley, however, has flowers of a soft rosy orange shade with a deeply coloured eye, and they are borne in towering heads tier upon tier, as is the case with the type. Happily, this variety comes true from seed, and if the seedlings are planted out in a suitable niche in the rock garden, as depicted in the illustration, a pleasing show of bloom is assured from the middle of May until midsummer or even later. Seed should be sown next month in gentle heat. A half-shady position and a retentive loamy soil suit the requirements of this variety admirably.

IN A HAMPSHIRE GARDEN.

SOME OF THE NEWER DECORATIVE ROSES.

(Continued from page 5.)

Rayon d'Or (Pernet-Ducher, 1910).—This striking yellow (almost garishly so) Rose was a very great break, and it has proved of very material benefit to the hybridist, and therefore all Rose-lovers are very much indebted to its raiser. Its colour is unique, and hits one in the eye with a certainty that brooks no denial of your immediate attention. But for all that—in fact, on account of that, possibly—Rayon d'Or does not appeal particularly to me. A fairly robust grower, quite mildew-proof; its foliage only succumbs to that worst of all Rose pests, black spot, to which it seems particularly prone. Whether the black spot is also answerable for its other bad habit I do not know, but it is very unsightly, namely, the dying back of wood of the season's growth. I am prepared to forgive it its thorns, which are formidable. I think everyone should have a plant of it in his garden in bush form, but I cannot recommend it as a standard or as a bedding Rose. It has had and will continue to have an influence on many future generations of new Roses, and one can only hope that it will transmit its good points, which are undeniable, to its offspring.

Reine Marie d'Italie (H.T., Bernaix, 1910).—There is not much shape in this variety, but the colour is at times quite good—a deep ochre yellow that stands well. It is strongly Tea-scented, and its habit of growth is Tea-like. It is quite free-flowering enough for a bedding Rose, and my couple of plants have arrested my attention on more than one occasion during the season. It might be tried instead of Lady Hillingdon in the Midlands and the North as a yellow bedder.

Rose du Barri (B. R. Cant and Sons, 1911).—This is quite happily named; it is a very free-flowering bedding Rose of about three rows of petals of a charming rose du Barri pink. It has

a strong scent, and is very useful cut in long sprays for the house, as many of the flowers open at the same time and last well when cut. Almost mildew-proof and a good grower.

Seabird (Hugh Dickson, 1913).—This has been well exhibited on many occasions by the raisers during the last two seasons, and was distributed by them last autumn. Its small but well-formed flowers are of a delightful primrose shade of yellow—a colour that is badly wanted—and, if it will stand, this Rose will speedily be in request. The plants are of good shape, of the desired free-branching habit, producing their flowers freely on good, erect growths. I am looking forward to flowering it here this year.

Sunburst (Pernet-Ducher, 1912).—"Variable," I am afraid, must be the decision with regard to this Rose. The majority of the flowers I had last year lacked the true Sunburst colour, and looked to have had to burst through a very heavy raincloud and suffered badly in the process. Still, I have had some beautiful coloured buds that easily beat Lady Hillingdon or any other Rose for purity of colour, but they were few and far between. The pretty theory about stopping the first flowers has not worked out of doors with me; it may very well do so under glass. I shall continue to grow it for the sake of the one or two "righteous" flowers, but a bed I saw of it in the autumn was distinctly disappointing and had to play second fiddle to Lady Hillingdon.

Theresa (Alex. Dickson and Sons, 1909).—Very charming in the bud and early stages and lasting well to the end. This semi-double Rose was much admired, both in the garden and in the house. Its rather unusual colouring appeals to many. Deep orange pink with carmine markings on the outside petals in the bud form, it opens out into a pretty semi-double silvery pink with distinct carmine veinings. Very free-flowering, sweetly scented, not particularly subject to mildew, and a good strong grower. It is a very delightful and at the same time useful Rose. Tea scented.

Verna Mackay (Alex. Dickson and Sons, 1912).—Such has been the demand for this delightful Rose that I understand the raisers can supply no more plants this season. I am not surprised. Everyone admired it here; its exquisite shape and delightful colouring made it at once one of the most beautiful buttonhole Roses there is. It can be best described as a yellow Carine. All those who like Roses for wearing on the dress or in the buttonhole cannot do better than grow these two Roses if they can get them. Good free habit, almost lemon colour, nearly mildew-proof, it is very difficult to find a fault with Verna Mackay.

Viscount Carlow (Alex. Dickson and Sons, 1910).—One would venture to think there was a good deal of the old G. Nabonnand blood in this Rose. It has the same shell-like petal, but is a deeper colour and a much stronger grower, with fine dark foliage which, alas! is not mildew-proof. It was splendid in the autumn and very free-flowering all the season.

Viscountess Enfield (Pernet-Ducher, 1910).—If this Rose was only a better grower it would be quite useful. The flowers are at times very pretty—a good coppery rose—but they are small and not very lasting.

Willowmere (Pernet-Ducher, 1913).—I think this is the pick of the Pernet-Ducher seedlings. It is a delightful, delicate shade of coppery pink. I have not grown it, but have had some very beautiful flowers of it sent me. I intend to try it out of doors this year.

Southampton. HERBERT E. MOLYNEUX.

NEW ROSE IONA HERDMAN.

VISITORS to the National Rose Society's Provincial Show at Gloucester in July last will remember this beautiful Rose, for it was the most striking of all the novelties, and was deservedly awarded the society's gold medal. It is a decorative variety after the colour of Old Gold, but of greater depth and intensity. It was shown in a basket, depicted in the illustration, and came in for general admiration. It is one of the sterling novelties raised by Messrs. S. McGredy and Son

CULTURAL HINTS ON NEW AND RARE PLANTS.

TREES AND SHRUBS.

Carpenteria californica is a Californian shrub closely allied to the Mock Oranges, though less hardy. Thriving well in the Southern Counties, it is also sometimes found in good condition in the Midlands, while it has been noted in good health as far North as Perthshire growing in a sheltered position on a rockery. Its evergreen leaves are 4 inches or 5 inches long and scarcely more than an inch wide, while its white flowers, which are produced in clusters, are from 2 inches to 3 inches across. Loamy soil, with a little leaf-mould or peat, and a position sheltered from cold winds are conducive to success.

thrive against a wall with a south or west aspect. Light loamy soil forms the most suitable rooting medium, and a little peat or leaf-mould mixed with the soil at planting-time encourages the formation of roots. Seeds form the most satisfactory means of increase.

Cotoneaster applanata is a new species from China, which promises to rank with the best of the Himalayan species previously grown. Of free growth, it forms long, rather slender branches, with dark green ovate leaves. Its chief attraction lies in its fruits, which are bright red in colour and produced with remarkable freedom, hanging on the plants throughout autumn and early winter. Planted in a shrubbery or on the open lawn, it thrives excellently in soil of a loamy nature, and may be readily propagated by means of seeds or by cuttings of half-ripe shoots.



THE NEW GOLD MEDAL ROSE 'IONA HERDMAN.'

Lycium pallidum.—This is perhaps the most interesting shrub in a genus of which the common Tea Tree (*L. chinense*) is the best-known representative. A native of Mexico, it forms a loose bush 3 feet to 5 feet high, with glaucous leaves and rather large, tubular, yellowish green flowers, which are succeeded by orange scarlet fruits. It is increased by seeds and grows well in ordinary garden soil, but must be placed in a permanent position while quite small.

Notospartium Carmichaeliae.—This New Zealand shrub has been known in botanical collections for many years, but it is rarely met with in private gardens, although an exceedingly beautiful plant when the Rush-like branches are wreathed, during June, with pretty pink, Pea-shaped flowers. It is only suitable for the warmer parts of the country, but there are numerous places where it would

Fraxinus Mariesii belongs to the Flowering Ashes, of which the best-known example is the European *F. Ornus*. *F. Mariesii* is a small tree, native of China, and is conspicuous by reason of its dark green ample foliage and its large panicles of white flowers, which appear in May. It is essentially a tree for a prominent position on the lawn, and should only be planted where really good and fairly moist loamy soil can be provided. It is most satisfactory when grown from seeds, but is sometimes grafted upon stocks of *F. Ornus*.

Eueryphia cordifolia.—This Chilean shrub differs from the better-known *E. pinnatifolia* by having simple oblong leaves. Its white flowers are very pretty, and quite as ornamental as those of the commoner species. Although it thrives in the open ground in some parts of Surrey, it is really a shrub for the South-West Counties, and the most

satisfactory results are obtained from it in Devonshire and Cornish gardens. Plant in warm, well-drained loamy soil, and place a little peat or leaf-mould about the roots at planting-time. [Propagate by seeds.]

Aristolochia moupinensis.—A near relative of the common Dutchman's Pipe (*A. Siphon*), this Chinese species promises to become quite as useful as that widely-grown plant. A vigorous grower, it forms slender branches 10 feet to 15 feet in length in a single season, and bears ornamental green foliage and curiously shaped yellowish or greenish yellow flowers with purple marks. It is well adapted for planting against trellises or on pergolas, while it may also be employed for covering a large bush. Rich loamy soil forms the best rooting medium.

Rubus bambusarum.—The beauty of this Chinese *Rubus* lies in its long, slender branches and finely lobed leaves, for the combination makes it an exceedingly graceful plant, eminently suited for planting against a trellis or pergola, while it has also attractions when grown as a pillar plant in the open. Like other kinds of *Rubus*, it succeeds quite well in ordinary garden soil, and particularly in that of a loamy nature. A few of the older branches should be thinned out each year, in order to keep the plant within bounds and to prevent a heavy appearance.

EPACRIS FOR WINTER FLOWERS.

SOME of the species of *Epacris*, and many of the garden varieties that have been obtained therefrom, may be had in flower during the winter months, and they are very useful for the decoration of the greenhouse at this season. What is more, they retain their beauty for a considerable time, and their long shoots, wreathed with flowers, are very useful for table decoration when arranged in small vases. In the present-day rush the merits of many subjects that are of somewhat slow growth are apt to be overlooked, and this is, no doubt the cause of the comparative neglect of hard-wooded plants in general, for many of them are really of great beauty. That this class of plants only need a stimulus of some kind to bring them into the light of popularity was well shown last year at the Royal Horticultural Hall, when a collection of Heaths, representing the wild flora of the neighbourhood of Caledon, Cape Colony, was surrounded by admirers during the greater part of the day. To return to the forms of *Epacris*, it may be pointed out that they vary in colour from pure white to bright rosy red, some of the more delicate shades of pink being especially pleasing. The pure white *Epacris onosmaeflora* flore plena attracts by reason of its pretty double, rosette-like blossoms, while the brightly-coloured *E. longiflora* carries the display on into the summer months.

H. P.

SEASONABLE NOTES ON CARNATIONS.

NOW is the time that Perpetuals are, as a rule, propagated, and though they are generally facile things to root, there are some growers who experience a difficulty in getting up their yearly stock from cuttings.

The only time cuttings have failed here has been when the attendant has allowed them to flag, and, worst of all, when flagging has been a result of dryness. I am so particular about the cuttings being always moist that as soon as they are detached

that plants from cuttings are superior in every way. I have also grown plants from eyes, but only of new sorts, and, of course, a short piece of stem with its two leaves and its one break is always a long way in the rear of the cutting. The only excuse one can give for the "eye" is that it is detached from the lower portion of a cutting, that it increases the number of plants of a scarce variety, and therefore is a gain. Another way of increasing new varieties is to use the top of the rooted cutting, when it is stopped, as another cutting. Moisture has a very pronounced effect in the production of roots in young Carnations; consequently, after the cuttings have been transferred from the propagating medium to small pots, the soil should be

kept continually in a moist condition. This treatment will ensure a rapid ramification of the soil with roots and the transference of the plants to larger pots—another part of their early treatment which on no account should be delayed a day longer than can be helped.

Just when to stop the plants has to be decided by the condition of each. I am strongly of the opinion that early stopping is a mistake, and I like the plant to be well established at the roots and with a growth at an average of eighteen leaves before stopping; but of this I hope to have more to say later, because now I wish to name a few varieties with which the beginner ought to furnish himself, or herself, for one of the most enthusiastic growers I know is a lady who does everything herself for her pets.

Good Varieties.—Some I rather hesitate to name on account of idiosyncrasies which a grower in a small way would find wearisome. Such is *Carola*, than which *Triumph*, though not so expansive, gives much better results, and *Baroness de Brien*, rather shy to bloom and asking for high cultivation. Some, of course, do well with one and not so well with another, and there are good and less good forms of varieties, which the grower will be sure to notice occurs in his own stock, for the Perpetual is essentially sportive alike in form and colour. These, then, and *Mary Allwood*, *May Day*, *Empire Day*, *White Wonder* or *White Perpetual*, *Winsor*, *Triumph*, *Countess of Lathom*, *Mikado*, *Fairmount*, *St. Nicholas*, *Rose Dorée* and the *New*

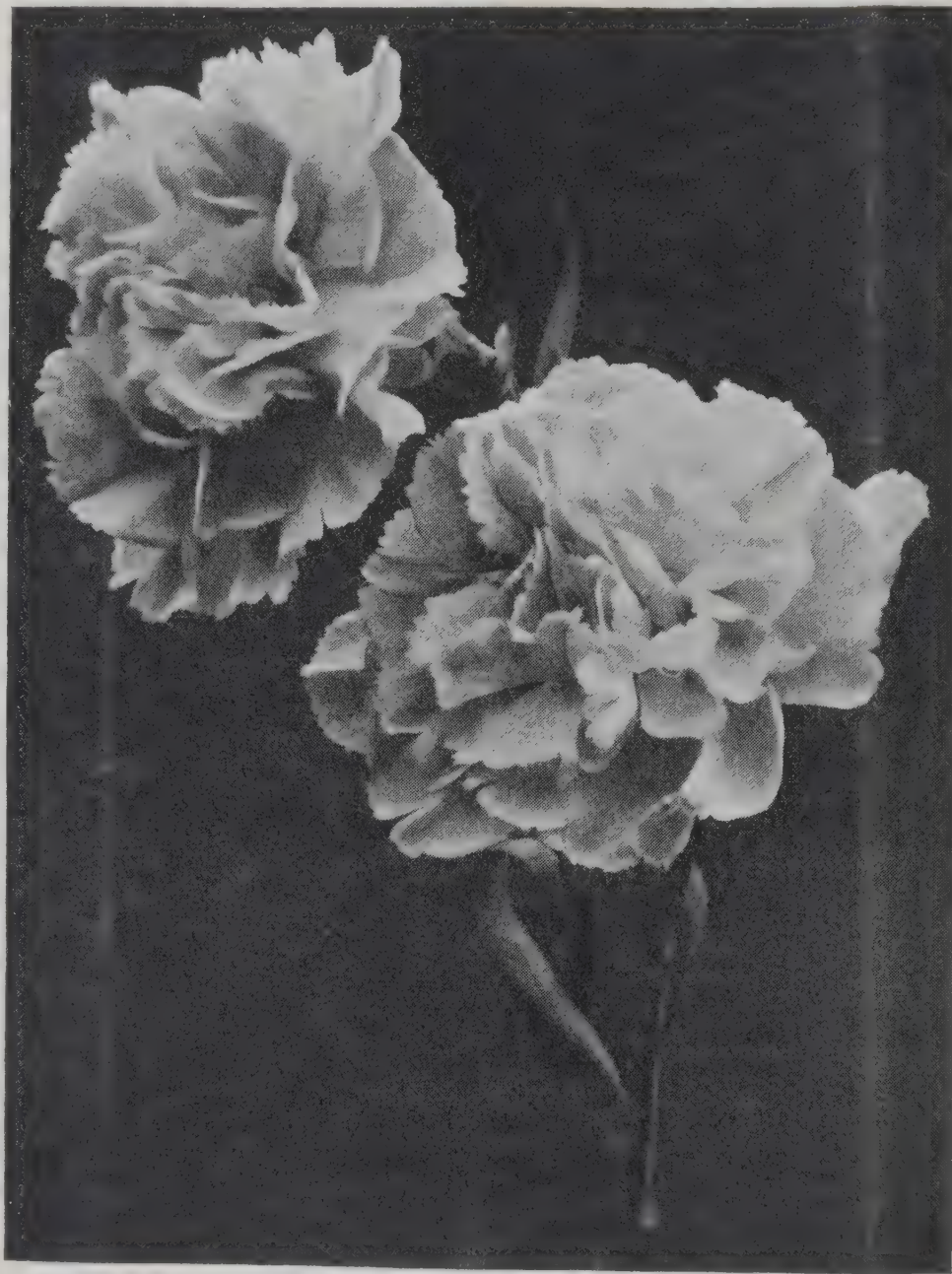
Champion and *Gorgeous*, and, I think, though superseded by *Empire Day* and *Lady Northcliffe*, the very free *Mrs. F. Burnett* should be added.

Prestonkirk, N.B.

R. P. BROTHERSTON.

CARNATION SALMON KING.

WHEN better known this is sure to be one of the most popular of Perpetual-flowering Carnations. It is an effective and beautiful variety, with bright salmon rose flowers that are freely borne even in the depth of winter. The blooms are full and travel well, while they are also fragrant and the calyx does not split. In October last this variety gained the distinction of an award of merit from the Royal Horticultural Society when shown by Messrs. Stuart Low and Co.



THE PERPETUAL-FLOWERING CARNATION SALMON KING.

from the plants they are moistened and kept so, and the rooting medium, after their insertion, is kept wet till roots have been emitted. In a stove propagating-pit cuttings root in from one to three weeks; in a cooler structure, in three to four weeks. Sand is the universal rooting medium, but this is by no means essential, and acting on experience I gained years ago with *Germania*, thousands of which I rooted in spring, the cuttings being inserted in a bed of firm soil and protected by means of shallow bottomless boxes covered with glass, I rooted cuttings of Perpetuals in November last in much the same way and in soil.

Layering is another and certain method of propagation. I am, however, of opinion, from the behaviour of the few I have grown from layers,

GARDENING FOR BEGINNERS.

HOW TO PLAN AND CROP A GARDEN WITH VEGETABLES.

IN dealing with this subject I am presuming that the cultivator has not had much experience. A cultivator of flowers or fruits, as well as of vegetables, is obliged to gradually obtain experience if he is relying solely on that gained year by year from the actual cultivation of the various crops. There is sure to be some loss of good pro-

well as partially overshadowed. Fig. B shows a plan of a garden very suitable for a quite open position—one, for instance, surrounded by a low hedge or fence constructed of wood.

The Treatment of the Soil.—The soil must not be dug or trampled on while it is in a very wet state. Quarters that were dug in the early part of the autumn, or trenched later, should be left undisturbed for a time, until the weather generally has had a beneficial effect on it. In the meantime, however, the cultivator may proceed with the work of marking out the various plots, so that he will have all ready for the seeds and plants in due course. Where soils of a light nature obtain, much progress may be made during open weather with the actual work of preparing the ground for the crops that are to be dealt with first.

Fig. A.—No. 1 denotes the garden frame placed in the warmest corner of the garden. In a frame of this kind many seeds may be sown, and the resultant plants will be available for putting out much sooner than those raised in the open border. A frame is more necessary in a garden the soil of which is clayey; for this reason, while the clayey, cold soil is mellowing and getting warmer, the plants of the earliest kinds of vegetables are being grown on, so that very little time is lost, and, of course, there is no necessity for untimely working of such soils, which, if properly treated, generally yield very heavy crops of high-class produce.

In the frame, Cauliflowers, Brussels Sprouts, Celery, Peas, Leeks and Onions may be raised. In borders Nos. 2 and 3, early Carrots, Turnips, Potatoes and Peas may be grown; in Nos. 4 and 5, early salads. Tall-growing kinds, such as Runner Beans, Peas and Broad Beans, should be cultivated in Nos. 6, 7 and 8; in No. 9, early and second-early Potatoes, where late ones are not grown in the garden. Onions, Carrots, Beet and Parsnips should be grown in No. 10, salads and Parsley in summer in Nos. 11 and 12, Celery in

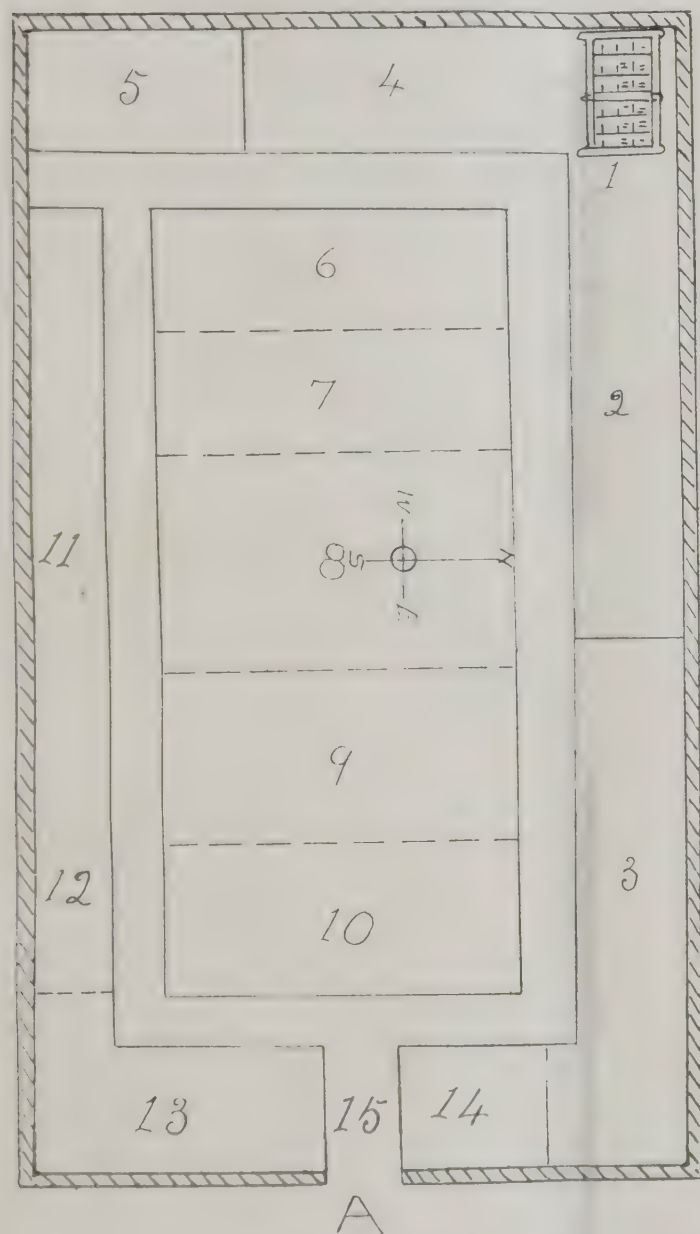
No. 13, and herbs in No. 14. Near the frame, seed-beds, in which winter greens may be raised, should be formed. No. 15 denotes the paths.

Fig. B.—In this garden, the form of which is typical of many hundreds in the country, there is only one central path, the various beds being laid out to right and left of it. Nos. 1, 2 and 3 are beds for early Potatoes, Turnips and Carrots; Nos. 4 and 5, beds for early Peas, Dwarf Beans, Broad Beans and Spinach; No. 6 would prove valuable as a warm corner in which to raise early seedlings for transplanting later; No. 7, Celery; No. 8, late Potatoes; No. 9, main crops of Onions, Carrots, Parsnips and Beet; No. 10, main crops of Broad and Runner Beans and Peas.

Of course, these would follow the planting of the winter greens, but the cultivator must get the young plants ready to fill vacancies as the first crops are cleared off the ground. G. G.

A BEAUTIFUL PLANT FOR HEDGES.

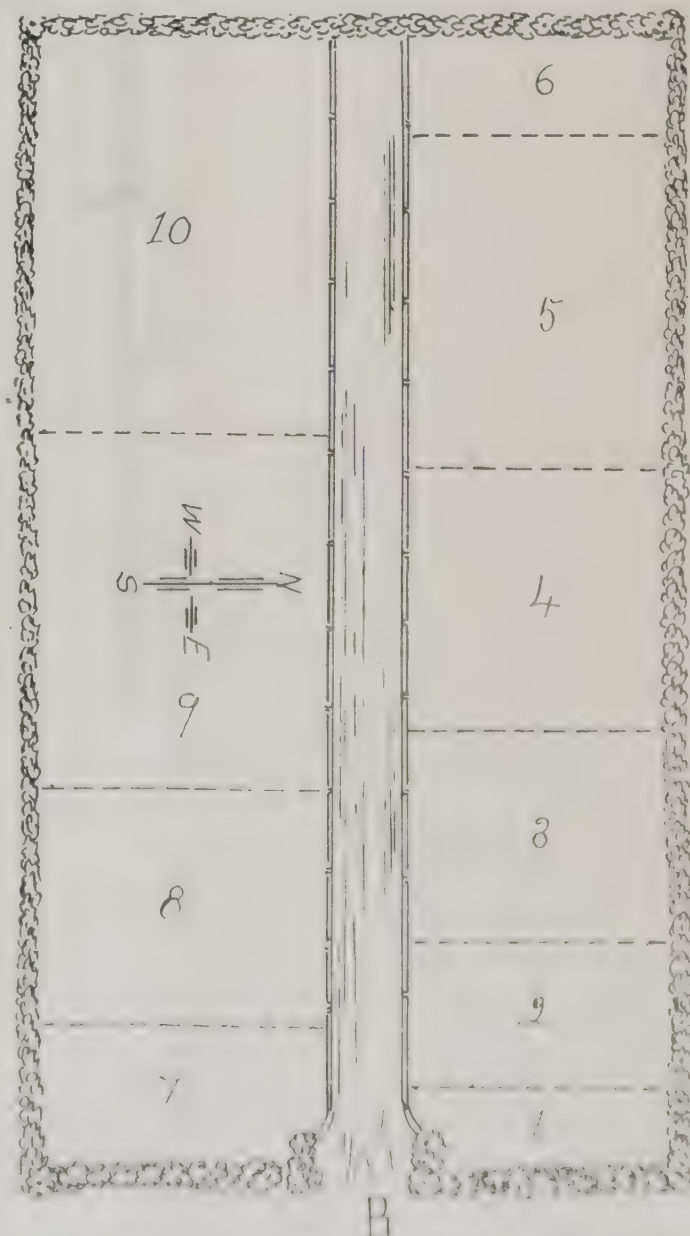
COTONEASTER SIMONSII makes a very beautiful and satisfactory hedge for a garden, and a well-trained hedge adds considerably to the good appearance of the garden. The plant referred to grows rapidly, almost as quickly as the Privet; but it does not dry up the soil to the same extent as the latter. The leaves measure about an inch by half an inch, are dark green in colour, and remain on the plants throughout mild winters. Then there are the lovely orange and red coloured berries, which add to the beauty of the fence. In a few years' time the hedge, if well cared for, gets thick and compact—much firmer than does one of Privet. In mild weather the Cotoneaster may be planted any time till as late as March. The soil, after being trenched about eighteen inches deep, will form a suitable rooting medium without the addition of manures. The latter may be lightly pointed in after an interval of five years, to afford a stimulant to the plants, as they may need it then. The aim should be to secure a short-jointed, dense growth. Put the plants in zigzag form a foot apart. B.



PLAN OF AN ENCLOSED GARDEN WITH CENTRAL BEDS.

duce and much disappointment; but through the pages of *THE GARDEN* a reader may greatly lessen that loss, if not entirely avoid all loss, by following the hints given herein in reference to the growing of the principal kinds of vegetables during the year 1914.

Now, some gardens—especially in suburban and town areas—are much enclosed by high, or fairly high, buildings. In such circumstances the owner or cultivator must avoid as much as possible having his more important crops near the other boundaries, as, owing to the partial shade, the growth of the plants will be somewhat adversely affected. The nearer the centre of the garden they are, the more sturdy and satisfactory will the growth be. Fig. A shows how a garden ought to be planned for a position such as the one referred to. Of course, it is suitable for any position, open as



PLAN OF A KITCHEN GARDEN FOR AN OPEN POSITION.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Fruit-Houses.

Early Peaches.—Peach trees in the early house will now be swelling their buds, and, before the flowers are open, the house should be carefully fumigated with XL All Vaporising Compound to destroy any green or black fly which may be present. During the flowering period the atmosphere should be kept on the dry side and a night temperature of 50° maintained. Admit air whenever the external conditions are favourable. The flowers when open should be lightly touched at midday with a rabbit's tail or a bunch of soft feathers tied on a light Bamboo cane. As soon as the flowers are set, the trees may be lightly syringed twice daily, but avoid a stagnant atmosphere.

Figs in Pots.—Trees which were placed in heat at the beginning of December will now be showing fruit. A moist atmosphere and an almost constant circulation of air should be maintained. A temperature of 50° at night will be quite high enough till the fruits are well advanced. Fig trees planted in restricted borders may be started now. Their chief requirements are a moist atmosphere, plenty of water at the roots, providing the borders are well drained, and a temperature of 50° to 55° at night.

Plants Under Glass.

Winter-Flowering Begonias.—Plants of the Gloire de Lorraine type which have finished flowering should be cut over now, removing all the flower-spikes without cutting the plants too hard. If kept in a temperature of 65° and frequently syringed, good, strong cuttings will soon be available for next season's supply.

Carnations.—Autumn-struck plants of Souvenir de la Malmaison should be freely ventilated in order to keep them stocky. A temperature of 45° at night will be high enough. Old plants which are well established and the pots full of roots may have weekly applications of Clay's Manure.

Cinerarias.—Plants which have been grown in cold pits may be placed in a cool house now. Fumigate the plants at once and give frequent applications of manure-water.

The Flower Garden.

Sweet Peas should be sown now for planting out in April. Three-inch pots may be used, placing only a few seeds in each pot. They may be stood in gentle heat until the plants are through the surface, when they may be removed to a cold pit and gradually hardened. Protection from mice is necessary until the plants are through the surface.

Sowing Seeds.—Now is the time to sow seeds of certain bedding plants, such as tuberous-rooted Begonias, *Verbena venosa* and *Pentstemons*. All these should be placed in a temperature of 65° to cause them to germinate as quickly as possible. As soon as the seedlings are large enough to handle, they should be pricked off in small pots or shallow boxes. *Delphiniums* may also be sown now for flowering in the autumn.

Chrysanthemums.—Plants which were lifted in the autumn and placed in cold pits are now producing plenty of shoots suitable for cuttings. These should be inserted in sandy soil before they become drawn, and placed in a close, cool pit.

The Hardy Fruit Garden.

Pruning.—All trees on north walls should be pruned and nailed while mild weather lasts. The soil should then be lightly forked over and left to the influence of the weather. In planting fruit trees on north walls, the border should be thoroughly trenched and a quantity of broken bricks and old lime rubble mixed with the soil in order to keep it in a porous condition. The pruning and regulating of orchard trees should be taken in hand as soon as possible. In the case of young trees, all branches that cross each other should be removed in order to admit light and air to all parts of the tree. If this is neglected while they are young, it is a difficult matter to restore them to a respectable shape afterwards. The leading shoots should be cut well back each season.

so that when the trees have grown to a fair size each branch may be furnished with fruiting spurs from top to bottom.

The Kitchen Garden.

Tomatoes.—Seeds should be sown at once and placed in a temperature of 70°. When the seedlings are well through the surface, the pans should be placed quite close to the roof glass in a temperature of 60°.

Cucumber Seeds should also be sown in small pots and placed on a hot-bed within 18 inches of the roof glass. Protect the seeds from mice and plant out the seedlings as soon as they have made their second rough leaf.

Rhubarb Roots may be lifted and placed in heat. Any place will suit them so long as sufficient heat can be produced to start them into growth. The Mushroom-house or a heated pit will suit them well.

Mushrooms.—In order to keep up a regular supply of Mushrooms, a bed should be made up every three or four weeks. Let the horse-manure be collected and thoroughly prepared before the beds are made up. If placed in an open shed and turned every second day for a fortnight, it should be ready to remove to the bed. After a few days the material may be rammed tightly together, and when the temperature is steady at 80° the spawn may be inserted 2 inches under the surface.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Onions.—Where Onions are required for exhibition purposes, now is a suitable time to sow the seeds. Use shallow boxes filled with moderately rich soil, which should be well watered before sowing, and place in a cool greenhouse or vinery in a temperature of from 45° to 50°. No water will be required until the seeds germinate, after which they should be placed on a shelf as near the glass as possible and watered carefully, as they are very liable to damp at this season.

Cauliflowers.—A small sowing of an early variety of Cauliflower may now be made. I have found Sutton's First Crop and Dobbie's Earliest of All useful for this sowing. Sow the seed thinly and keep the young plants near the glass, and the greatest possible care will have to be taken to prevent damping.

Tomatoes.—Where early Tomatoes are required, a few seeds may now be placed singly in a pot or pan and stood in a house of about 60°. If the seeds are new, they will germinate in a few days, so that they will have to be carefully looked after, otherwise the seedlings will become drawn. Prick off into small pots when they show the third leaf, keep the soil rather loose, and place them on a shelf near the glass.

Seakale not intended to be lifted and forced may now be covered with pots and protected with stable manure. It is generally said to be of a much finer flavour treated in this way than when lifted and forced.

Brussels Sprouts.—When the Sprouts have been picked and the tops used as a vegetable, and one has some difficulty in giving a change, I find an excellent dish can be made from the cores of the stalks, which used to be thrown on the rubbish-heap. It is prepared by splitting up the stalk and taking out the core. Boil the cores in hot water with a little soda, as one would do with Cabbage, and serve with butter. The *chef* calls it *purée de Choux de Bruxelles*. Those who have not made use of these should most certainly give them a trial. They make a simply delicious dish.

Hardy Fruits.

Strawberries.—Plantations of Strawberries that are rather old and have to bear a crop of fruit for another season will be greatly benefited by a liberal application of strawy farmyard manure. This may be given now. Should the weather permit, by the time the fruit appears the straw will be washed clean, and no other protection will be required.

The Flower Garden.

Lily of the Valley.—Established beds will be greatly benefited by a liberal top-dressing of spent Mushroom-beds, which is about the only way one can feed them, and, on the whole, will be all that is required. At this particular season the great evil to be guarded against is damp. This applies more particularly to occupants of cold frames, such as Carnations, *Pentstemons* and Pansies, which should only have sufficient water to keep them alive, with plenty of air on all favourable occasions. Examine roots of Dahlias and tuberous Begonias, and any that may show the slightest sign of shrivelling or rotting must be attended to. Should the variety be extra fine, place the plants in pots or boxes of soil or sand. Keep all pots or boxes of cuttings on the dry side.

Fruits Under Glass.

Peaches.—Where a supply of early Peaches is required on established trees, a house may now be closed and brought on slowly. Admit air freely on fine days and apply no artificial heat for at least a fortnight; then only on very cold nights. Examine the borders to see that they are not suffering from a lack of moisture. As soon as the flowers show signs of opening, fumigate the house, as I generally find that if fumigated at this stage they are not so liable to be attacked by green fly later.

Grapes.—Where pot Vines are not grown and Grapes are expected fairly early in the season, close down a house at once, and, as in the case of Peaches, apply no fire-heat for at least a fortnight. The temperature should not exceed 45° by night, with a rise of 10° by day. As soon as the buds show signs of swelling, a slight syringing with tepid water may be given twice a day to assist the buds to move, and great care will be necessary in admitting air at this stage.

Strawberries.—A fresh batch of Strawberries may be taken into heat. Force very gently at first, and as the plants begin to move they may be given a higher temperature. As Strawberries are gross feeders, they should be top-dressed with a little loam and artificial manure, which will be sufficient until the fruit has set.

Figs.—The first crop of Figs will now be on the move, and should have an abundant supply of water at the roots. Syringe the trees freely, as it is of the utmost importance to keep the shoots and leaves absolutely clean, otherwise scale will very soon make its appearance.

Plants Under Glass.

Begonias are again coming into favour as bedding plants, and deservedly so, as under liberal treatment I know of no plant that will give more satisfaction. To increase the stock a sowing should be made at once, and if grown on steadily they will flower next August. Sow in well-drained, shallow pans with some coarse material over the crocks and some fine sandy loam on the surface. Water it slightly with tepid water. Sow the seed carefully, scarcely cover with a little sand, and place in a temperature of between 60° and 70°. Germination is, as a rule, very slow. Thin out the seedlings as soon as they can be handled and keep in a growing temperature for some time.

Sweet Peas.—Those that were sown in the autumn and intended for blooming indoors will be growing freely, and may now be potted into their flowering pots. It is of the utmost importance to ensure a sturdy growth that they should be kept as near the glass as possible and avoid coddling. Train each shoot up singly. Soil may now be prepared for sowing the main batch towards the end of the month.

Celosia.—Seed may now be sown of that elegant plant *Celosia pyramidalis*, which is so deservedly popular for furnishing greenhouses.

Verbena venosa.—Where this lovely *Verbena* does not stand the winter without protection, it is a good plan to make a sowing now. It is, however, one of the most tiresome things to germinate I know. I have tried it in every possible way, with various results. But the plan I now adopt is to steep the seed in tepid water for a few hours before sowing. So far, this is my most successful method. After all, it is really worth a little extra trouble.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE IDEAL ORCHARD FOR SMALL HOUSES.

(Continued from Vol. LXXVII., page 627.)

THE planting of the standard trees having now been completed, the next important thing we have to do is to prune the trees. This, although a simple matter, is one which puzzles the amateur fruit-grower more than perhaps any other item of work he has to attend to. In the case of young trees such as we are considering, there is very little pruning to do. What there is consists in cutting back the whole of the young shoots of last year's growth by one-half their length, being careful to cut each shoot back to an outside bud (that is to say, a bud on the outside of the branch, and not on the inside), the reason for this being that the new shoots issuing from such buds will grow laterally and thus help to keep the centre of the tree open.

Pruning in the Succeeding Year.—This will consist chiefly in thinning out weak shoots from the body of the trees where they appear to be too thick, and in slightly shortening the longest leading shoots at the end of the main branches. Indeed, this is the principle which should guide the pruner in his work of pruning in future years. Thin out the trees to let in light and air where growth is too thick, selecting the weakest shoots and those, if any, which grow across the body of the trees for cutting out, and slightly shorten back the longest of the leading young shoots as pointed out above. Standard orchard trees should never be overpruned.

Varieties to Plant.—In respect to a strictly utilitarian orchard such as this, it is necessary to be on one's guard to plant only those varieties which are healthy growers and free and consistent bearers. This means that some of our best-flavoured Apples, such as Cox's Orange Pippin and Ribston Pippin, must be left out, or at any rate only a tree or two planted, as they are not robust growers, and, moreover, they are much addicted to canker. Another point we have to consider in the varieties we plant in such an orchard as this is the suitability of the fruit for sale purposes, because no doubt most of it would in due course find its way to market. This has been considered in making up the following list of eighteen dessert varieties and the same number of cooking varieties:

Apples, dessert.—Gladstone, ripe July; Irish Peach, August; Devonshire Quarrenden, August; Worcester Pearmain, September; James Grieve, September and October; Ellison's Orange, October; Cox's Orange Pippin (two trees only), November and December; Allington Pippin, December and January; King of the Pippins, December and January; William Crump (new Apple), December and January; Adam's Pearmain, January; Christmas Pearmain, December and January; Blenheim Orange, December and January; Scarlet Nonpareil, December and January; Barnack Beauty, January and February; May Queen, February and March; Brownlee's Russet, February and March; and Sturmer Pippin, March and April.

Apples, kitchen.—Early Victoria, ripe July and August; Potts' Seedling, August and September; Grenadier, September and October; Gascoyne's Scarlet, October; Royal Jubilee, October and November; Blenheim Orange, December and January; Mère du Ménage, January

to April; Warner's King (on warm soil only), November; Norfolk Beauty, November and December; Tower of Glamis, January and February; Lane's Prince Albert, February and March; Bismarck, Christmas to February; Belle de Boskoop, January to April; Bramley's Seedling, January to April; Newton Wonder (better than Wellington), January to April; Lord Derby, December; Annie Elizabeth, March and April; and Wagener (latest of all), May.

Plums.—A selection of nine varieties of standard Plum trees: The Czar (cooking), ripe early in August; Denniston's Superb Gage (dessert), early in August; Jefferson's Gage (dessert), early in September; Monarch (dessert or cooking), early in October; Oullin's Golden Gage, early in August; Rivers' Early Prolific, early in July; Victoria (plant most of this, dessert or cooking), September; Reine Claude de Bavay (dessert), September; and Coe's Golden Drop, October.

Pears.—These are not so useful in a cottage orchard as are Apples and Plums. At the same time it would be a mistake not to include a few trees, say, a score. These could be planted between the rows of standards as pyramid or bush trees, and I would suggest they be planted at the end next the house, so as to be more under observation when ripening. Of these I give nine suitable varieties: Williams' Bon Chrétien, ripe September; Triomphe de Vienne, September; Conference, October and November; Louise Bonne of Jersey, October and November; Marie Louise, November; Doyenné du Comice, November; Vicar of Winkfield (cooking), December; Blickling, December and January; and Le Lectier.

Following after the Pear trees, between the standard Apple and Plum trees I recommend that Gooseberries, Raspberries, Black, Red and White Currants, also Strawberries, be planted, leaving a large enough space at the bottom end of the orchard furthest from the cottage (among the standard Apple and Plum trees) to grow an ample supply of vegetables. On either side of the centre row spoken of before I would suggest that a row of Loganberry bushes be planted at 9 feet apart and trained over rough timber trellis over the pathway. As well as being useful, this would add a touch of ornament to that part of the orchard. At the end of from seven to ten years the produce of this half-acre orchard, if well looked after, ought to be worth on an average, even at a low estimate, from £25 to £30 a year, or, say, from 10s. to 12s. a week. It is not necessary to point out what a boon and a blessing such an adjunct would prove to a working-man's home.

OWEN THOMAS, V.M.H.

GARDENING ACROSTICS.

DOUBLE ACROSTIC No. 6.

A famous Swiss botanist of the sixteenth century, who, after having collected 1,500 drawings to illustrate a history of plants, died before he could publish the work:

Firsts—His Christian name.

Lasts—His surname.

1. An English name for the Gladiolus.
2. A seed before it is fertilised.
3. A genus of Filices, which takes its name from the kidney-shaped covering of the sori.
4. A Campanula whose roots may be used as a vegetable and its leaves in a salad. Seldom seen now. English name.
5. The fruit of the world.

6. A famous and graceful Himalayan tree introduced to Britain about ninety years ago. Its usual English name.

Solutions of the foregoing must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C., not later than the first post on Saturday, January 17. Mark the envelope "Acrostic" in the top left-hand corner.

SOLUTION AND NOTES OF ACROSTIC No. 4.

HERBAL—SALMON.

- | | | | |
|------|---|---------------------|---|
| * 1. | H | YACINTHUS ORIENTALI | S |
| † 2. | E | VELYN'S SYLV | A |
| ‡ 3. | R | EGE | L |
| § 4. | B | LENHEI | M |
| 5. | A | RBUTUS UNED | O |
| ¶ 6. | L | OUDO | N |

William Salmon, doctor to Queen Anne, published his Herbal in 1710. It is a huge volume, and from his fulsome dedication to the Queen we may safely say he was "in a big way" when he wrote it. It is the last of the great Herbals. * The Dutch were afraid of a Hyacinth mania about 1734, on the lines of the disastrous Tulip mania of a century before, so much so that a book of that period was republished as a warning of what might be expected if prices became unduly inflated. † Evelyn was both a gardener and a statesman. His "Sylva" was published in 1664, partly to encourage the planting of Oak trees for the Navy. ‡ The elder Regel was one of the best-known European botanists of the last century. For a list of his works see Jackson's "Guide to the Literature of Botany." § Lancelot Brown, a landscape gardener of the eighteenth century. He excelled in his management of water. He was nicknamed "Capability" Brown, from his habit of remarking that a place had great "capabilities."—Johnson's "History of English Gardening," page 265. || Arbutus Unedo is popularly called the Strawberry Tree.—Nicholson's Dictionary of Gardening. ¶ J. C. Loudon's "Encyclopædia of Gardening" is a mine of information on everything connected with gardening. It was published in 1829. After Loudon's death new and revised editions continued to be published by his widow. The last we have seen is dated 1860. The early editions are particularly valuable on account of their good bibliography, which is omitted in all later ones. Felton, in his work on the "Portraits of Authors on Gardening," draws much of his information from this source.

RESULT OF ACROSTIC No. 4.

In accordance with our rules, it was possible to secure eight marks, one for each correct "first" and "last," and one for each correct light. The following marks have been awarded:

Seven marks.—L. A. Loudon, "Ping," "Judith" and "White Lady."

Six marks.—"Tempus Fugit," "Hero," R. Chapman, "Jan," "Penwarne," "Nautilus," "Westbank," "Tortoise," "Boarsvale" and "Rusticus."

Five marks.—"Miller," "St. Kevins," Miss G. H. Jeffreys, "Elm" and "M. M."

Four marks.—William Acworth and G. D. King.

Three marks.—A. Henderson, W. Bond and W. Slocombe.

One mark.—W. Garwood and E. Ballard.

As stated in Rule No. 5, published in our issue for November 22, 1913, Acrostic No. 1 completes the first series. In this series it was possible to get a total of 41 marks, and we give

below the names of those who secured 30 marks and over: "White Lady," 38; L. A. Loudon, 38; "Hero," 37; R. Chapman, 37; "Ping," 37; "Nautilus," 36; "Jan," 35; "Rusticus," 35; "Westbank," 35; "Elm," 34; "Boarsvale," 33; "Judith," 33; "Tortoise," 32; "Miller," 31; and "W. R. D.," 30. Under Rule 8, the first prize of two guineas and the second prize of one guinea will be added together and divided between

"WHITE LADY" and L. A. LOUDON.

Under Rule 5, these two competitors will be penalised 12 points in the second series, *i.e.*, Acrostics Nos. 5 to 8 inclusive.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation, he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEAS (La France).—The weak condition may be the result of overcrowded plants, or this in conjunction with the distance they are from the light. The vinery is not the best place for them, seeing they require the fullest light. Cannot you erect a temporary shelf for a few weeks? If so, and if you could also give the plants a shift into 8-inch pots, an appreciable improvement might ensue. A little bone-meal with the soil might also strengthen the plants. If you have enough rods, train the Rose out fan shape, and in January cut it back to one-half the length of the shoots or to the position of a good plump eye or bud. You do not say if the plant is in a cold or heated greenhouse, and you give no particulars as to the mature condition of the growth or whether early flowers are required or not, all of which would have assisted to a more helpful reply.

PLANTS FOR EDGING A BORDER (X. Y. Z.).—Yellow-flowered subjects suitable for this purpose are decidedly few. While the yellow Alyssum is remarkably showy in spring, it is not seen to advantage during the summer months. Sedum kamtschaticum is a pretty yellow-flowering species that grows about six inches high and blooms for some time in the summer. Iberis correifolia forms a pretty evergreen edging, and so does the small Periwinkle, Vinca minor. An edging that we have had under our notice, and which much impressed us throughout last summer, consisted of a band of Nepeta Mussinii, and we think this would not fail to give you satisfaction. It grows about fifteen inches high, and the masses of soft greyish-toned foliage impart to it a most restful and pleasing character. The spikes of pale lavender blue flowers, so freely borne throughout the summer, form an additional feature of attraction.

CALIFORNIAN POPPIES (H. W.).—There are two Californian Poppies, and you do not say to which one you refer. One is a shrubby, and in some gardens a sub-shrubby plant, with glaucous leaves and large white flowers. This is known as Romneya Coulteri, or Californian Tree Poppy. The other is an annual plant called Eschscholtzia californica. Both belong to the Poppy family, though neither is a true Poppy. If it is the former plant to which you refer, the seeds may be sown on arrival in light, sandy soil in a warm greenhouse. When the seedlings are large enough to handle, prick them off singly in boxes at a distance of 2 inches apart each way. When well established, place them in a cool and airy frame, and plant out in a nursery border in May. They ought to flower when two years old. If the Eschscholtzia is meant, keep the seeds in a cool place until March, then sow them thinly in light soil in a herbaceous border. Allow plenty of room, and eventually thin the plants out so that they stand at a distance of 9 inches or so apart. This is a very easy plant to grow, and often reproduces itself year after year from seeds left in the ground. The fine flowered named kinds are apt to deteriorate, however, if allowed to do this.

BROMPTON STOCKS GONE WRONG (I. W. F.).—We have carefully examined the leaves of the Brompton Stocks and have failed to find any trace of fungus in them. Their appearance suggests that there may be wireworm or something of that kind at their roots.

VIOLETS AND RED SPIDER (Blacklock).—The Violets are very badly attacked by red spider. The plants have probably been kept too dry, and almost certainly too warm and close. Syringe them with a solution of potassium sulphide, made at the rate of 1oz. of the sulphide to three gallons of water.

CARPET PLANTS FOR STANDARD FUCHSIAS (E. B.).—Some of the bedding Violas form a good groundwork for standard Fuchsias; indeed, we do not think you will improve upon them for the purpose. For Fuchsia Mrs. Marshall, the soft mauve variety Maggie Mott, one of the very best of bedders, would form a pleasing combination; but if you prefer a Viola of a darker tone, then we can recommend J. B. Riding, a rich, rosy claret-coloured flower. Dwarf plants of a good Heliotrope, such as Lord Roberts, would also be well suited for the purpose.

PLANTS FOR SHADED ROCKERY (Zameibe).—You ask for the names of some "common rock plants for a tree-shaded rockery." Any of those named below should succeed, though the measure of success would be in proportion to the degree of shade, not many plants thriving in dense shade. Arabis albidia, A. a. flore pleno, Alyssum saxatile, Aubrietias in shades of blue, lilac, violet, pink and purple, Iberis sempervirens, Coronilla varia, C. iberica, Campanula muralis, C. pusilla, C. p. alba, Polygonum affine, Mossy Saxifrage in variety, Acantholimon glumaceum, Megasea cordifolia, M. c. purpurea, Orobanchaceae, O. vernus, Saponaria ocyroides, Veronica prostrata, Crucianella stylosa coccinea, Achillea tomentosa, Acaena microphylla, Helianthemum in variety, Sedum spurium coccineum, S. kamtschaticum, S. pulchellum, S. middendorffiana, Hepaticas and Omphalodes verna. Interspersed among these might appear Snowdrops, Chionodoxas, Scillas, Leucojum vernum, autumn and winter flowering Crocuses, Anemone apennina, the Winter Aconite, and other bulbous or tuberous rooted plants.

VARIOUS QUESTIONS (Daisy).—The flowering-time of the Verbascum would be influenced by the locality, and as you appear to live in a cold district, the plants may not flower before August. Both kinds are perennial, but for decorative effect are best regarded as biennials, whose good flowering would depend upon the leaf development in the first year. Mid-April we should consider too late a date for sowing, if the idea is to get good specimens. Sutton's Pink Antirrhinum would be best for the border; the Swan River Daisy would be much too dwarf behind the Nepeta, and even the intermediate Antirrhinum would not be any too tall. You may, however, get the shade of colour in the tall Antirrhinum if you wish. A useful annual for carpeting the Azalea bed would be Alyssum maritimum compactum; it is white flowered, dwarf and free. A much better way of carpeting such a bed would be to plant some of the hardy Heaths, either Erica carnea or a good red form of E. vulgaris, such as Alportii. This would flower in autumn; the first named would flower during the winter months.

BULBOUS FLOWERING PLANTS FOR CHURCH DECORATIONS (B. W. A.).—The most suitable bulbous plants for your purpose would be Daffodils, Tulips and Spanish Irises, and a selection of each of these would provide flowers for cutting in April, May and June. The best Daffodils would be Golden Spur, Emperor, Empress, Barri conspicuus, Sir Watkin, grandis, ornatus, Poeticus, recurvus, Sulphur Phoenix and albicans; of Tulips, Yellow Prince, White Pottebakker, White Swan, Rosa Mundi and Prince of Austria among the early or bedding sorts, with Bouton d'Or, Flame, Golden Spire, Inglescombe Pink, Inglescombe Scarlet and The Fawn among May-flowering and Cottage varieties. To these could be added some late-flowering Darwin sorts, though we consider the above of a more useful character for the object in view. Of the Irises, British Queen (white), Chrysolora (yellow), Bronze King and Excelsior would be good. Paonies, both single and double, would be serviceable, though the former do not last long. Iris Kämpferi we should not consider quite suitable. The best plants for later flowering, also to be planted before the middle of February, would be Liliums longiflorum and speciosum album Krætzerei. The so-called Spiraea japonica would best suit your requirements.

TREES AND SHRUBS.

FLOWERING SHRUBS FOR A SUNNY PLACE (E. C.).—The following eight shrubs may be expected to give satisfactory results if planted under the conditions you describe: Berberis stenophylla, Spiraea arguta, Ribes sanguineum atrosanguineum, Diervilla Abel Carrière, Viburnum tomentosum plicatum, Cistus laurifolius, Philadelphus Lemoinei erecta and Forsythia suspensa. They may be procured from any of the nurserymen who advertise trees and shrubs in THE GARDEN.

SHRUBS FOR FLOWERS (W. G.).—The following should be of service to you in the circumstances: Philadelphus grandiflora, P. Lemoinei erectus, P. Mont Blanc; Lilacs Mme. Abel Chatenay, Marie Legraye, Negro, Mme. Lemoinei; Berberis Darwinii, B. stenophylla, Forsythia suspensa, F. Aitchisonii, Weigela Abel Carrière, W. van Houtte, Buddleia variabilis, B. veitchianus, Daphne Mezereum, and Rosa rugosa. You say nothing of the size and extent of the border, or the soil, but if greater variety should be desired you might, provided the soil is suitable, add hybrid Rhododendrons and the hardy Azaleas, the latter being particularly valuable both at flowering-time and for rich foliage effects in autumn.

SCALE ON MYRTLE (W. G. S.).—The Myrtle is badly attacked by scale insects and will be very difficult to clean. As many as possible of the little blisters should be removed with a blunt stick, assisted by a dip of soft soap (a handful) into which flowers of sulphur have been kneaded, dissolved in one and a-half gallons of soft water. After this has been done, spray the plant well at weekly intervals for three weeks with paraffin emulsion, spraying with clear water between the operations.

INJURY TO RHODODENDRON FOLIAGE (Pink Pearl).—The damage done to the foliage of the Rhododendrons is not the result of the attack of a fungus, though one is present on some of the leaves, but the result of drought in the past summer. When once the soil in which the plant is growing becomes really dry, the fungus, which plays the part of root-hairs in these plants, is likely to be killed, and subsequent watering is of little avail. One sees many Azaleas killed through allowing the soil to become dry, and it is the common cause of the death of Heaths in houses.

PRUNING AVENUE TREES (J. D.).—Your avenue trees will certainly require pruning if you wish them to develop into really fine specimens. In any cases where there are rival leaders, all must be removed save the centre one. Also where the branch system is very dense, a number of branches may be removed with advantage. When branches are developing rapidly in width and the trees are not increasing in height to a corresponding extent, the branches should be shortened. Bottom branches may be removed gradually, but do not take many off at once, or too great an area of bark will be exposed to sun which has previously been shaded. All cuts must be made parallel with and close to the bark of the trunk or main branches, and all wounds must be dressed with coal-tar as soon as made.

DWARF-GROWING SHRUBS (Teragram).—The following dwarf-growing shrubs would be likely to give satisfactory results in the bed you describe: Philadelphus Lemoinei erectus, Genista hispanica, Tamarix pentandra, Prunus japonica flore pleno, Kalmia latifolia and Pieris japonica for the back; and Cydonia Maulei superba, Spiraea japonica Anthony Waterer, Daboecia polifolia, Erica cinerea and varieties, Calluna vulgaris and varieties, Erica carnea, Leioophyllum buxifolium, Hypericum moserianum, Berberis Wilsonae, Genista pilosa, Cytisus Beanii, C. kewensis and Kalmia angustifolia varieties for other places. The Ericas, Callunas, Leioophyllum and Hypericum should be planted in small groups. The Eleagnus and Pittosporum you mention are likely to grow at least 12 feet high, and are not suitable to place among small-growing plants.

INJURY TO PRIVET (W. B. S.).—The Privet branch sent for inspection bore the fructification stage of the coral spot fungus (Nectria cinnabarina). This fungus often appears on dead wood, and may usually be found on old Pea sticks, but it is also found on living branches. The spores probably find an entrance through wounds, and the mycelium is present in branches for a considerable time before the visible or fruiting stage appears. By that time the injury is complete and there is no chance of saving an infested branch. It, however, is more often found on branches of trees or shrubs, and may take one branch of a tree and cause no further harm to that particular specimen. On the other hand, it may spread from branch to branch of a shrub and eventually destroy the whole plant. The only way to cope with the disease is to cut away and burn any branch which bears the small red fungus growths, and also all dead wood. As your Privets are old plants, it would, perhaps, be advisable to dig them up and burn them, and begin again with young plants. Vigorous young plants 2 feet to 3 feet high can be procured very cheaply, and they transplant without the slightest fear of them not re-establishing themselves. No real good can be done by using a fungicide for this disease.

THE GREENHOUSE.

INJURY TO SCHIZANTHUSES (Mrs. C.).—The Schizanthus plants are attacked at the root by a fungus, a species of Fusarium, which is killing the lower part of the stem and causing the withering of the upper part. This disease is very similar to, and perhaps identical with, the sleepy disease of Tomatoes. Cure is impossible, and prevention consists in sterilising the soil by steaming it before planting.

PLANTS FOR WINDOW (Mrs. L. W.).—(1) The success attending the cultivation of different plants in the window of your drawing-room speaks highly for the care and attention that you bestow upon them. We have little doubt that a Camellia would succeed under these conditions, but we do not feel so sure of a Cape Heath. Two of the most likely to thrive with this treatment are Erica gracilis, whose myriads of tiny rose purple blossoms are borne in autumn and winter, and Erica melanthra, a winter flowerer with small mauve-coloured blossoms and dark-tinted anthers. These may during the summer be stood out of doors, provided they are well supplied with water. (2) Weak soot-water is a good stimulant for Ferns, but it would be better still to alternate it with a little Clay's Fertilizer, which can be safely applied to Ferns. Of course, you will take care that only a very moderate dose is given. (3) As your Jessamine grows so strongly and yet flowers in a perfectly satisfactory manner, we do not think you can improve upon the practice which has proved to be so successful. It certainly seems a pity to cut away so much wood, but as this is necessary to keep it within bounds, we do not see how it can in any way be avoided. When cutting it back to the necessary extent, any old and exhausted wood should be removed entirely.



TUBEROUS BEGONIA
KING GEORGE V.



THE GARDEN.

No. 2200.—VOL. LXXVIII.

JANUARY 17, 1914.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Plants Protected from Frost.—Plants that are protected from frost should, during a spell of mild weather, have their covering removed during the day where it is possible, as it helps to retard the plants, which would otherwise become active under the influence of protection. Discretion should be used, for plants that are frozen ought not to be uncovered, but left until the frost has gone. This also applies to plants in frames.

Shortage of Cut Flowers.—During the last ten days cut flowers have been exceedingly scarce, and in Covent Garden Market prices have been higher than for many years past. In the provinces some of the smaller florists' shops have had to resort to artificial flowers to meet the deficiency. The mild weather experienced until Christmas brought many flowers along too rapidly, and those that would under ordinary circumstances have been available now were sold three weeks ago. Since then cold weather has been experienced in France and this country, and has retarded the later crops. The shortage is expected to last for at least another week.

Pruning Winter Jasmine.—This beautiful hardy shrub has flowered earlier than usual in most districts this winter, and now most of the blossoms have departed. Although much pruning is not needed, that which is required should be done during the next few weeks. Unless a bush is overcrowded, or encroaching on space required for other plants, it may be left alone. Where, however, growth is too dense, the oldest shoots ought to be removed. This will encourage the formation of stout growths that will flower freely next winter. If the shrub appears to be starved, a top-dressing, 2 inches thick, of well-decayed manure applied now will work wonders during the growing season.

Davidia involucrata.—There is an interesting reference to this tree in Mr. E. H. Wilson's new book, "A Naturalist in Western China." It appears in the fascinating chapter entitled "In Quest of Flowers": "Ascending a precipice with difficulty we soon reach the Davidia trees. There are over a score of them growing on a steep rocky declivity; they vary from 35 feet to 60 feet in height, and the largest is 6 feet in girth. . . . The distinctive beauty of Davidia is in the two snow white connate bracts which subtend the flower proper. These are always unequal in size, the larger usually 6 inches long by 3 inches broad, and the smaller 3½ inches by 2½ inches. At first greenish, they become pure white as the flowers mature, and change to brown with age. The flowers and their attendant bracts are pendulous on fairly long stalks, and when stirred by the slightest breeze they resemble huge butterflies hovering among the trees. . . . To my mind Davidia involucrata is at once the most

interesting and beautiful of all trees of the north-temperate flora."

To Make Stonework Look Green and Old.—We are occasionally asked if there is any chemical that will make stone steps or pedestals look old permanently. So far as we know there is not, but the following treatment will, in the course of a few weeks or months, give the stone a genuine mossy appearance. Wash down the bark of one or more large trees, and add to the greenish water thus obtained a little cow-manure and very little soot. Paint or sprinkle the stone two or three times with the liquid. If this is done at once, the stone will have taken quite a green, mossy tint by the spring, which will increase as time goes on. Flakes of moss obtained from old walls can frequently be encouraged to establish themselves on the stone, and even if the moss itself dies, the spores almost invariably germinate.

Climbers for Rambling Over Large Trees.—There are many climbing plants that look very effective when rambling over large trees. The common Virginian Creeper, as well as several other forms of Ampelopsis (which, correctly speaking, are Vitis) look very charming during the autumn hanging against the dark foliage of a Pine tree. The same may be said of Polygonum baldschuanicum, with its pink and white trusses of flowers, or P. multiflorum, which is a more vigorous and faster grower. Clematis montana and C. Flammula are excellent for such a purpose, and even the common Traveller's Joy (C. Vitalba) may be used for the wilder parts of the garden, as it is ornamental both in flower and fruit. Rosa moschata will often ramble over the top of a Pine tree 130 feet high, and look quite a picture in summer with its many white flowers. All of them may be planted now, and only require a little attention till they have become established.

Pruning Outdoor Vines.—Grape Vines growing outdoors, either against a wall or poles, should be pruned without delay. If grown upon the spur system, the lateral shoots should be cut back to about two buds from the base; but if on the extension system, the wood growths laid in during the summer to take the place of those that bore fruit during the past year must be cut back to a plump bud, leaving about four feet of the shoots. The last-named system is preferable for Grapes growing out of doors, as the shoots grow away more freely than those on the spur system. Should the Vine be infested with red spider, give the wood a dressing with a mixture of water, soft soap and flowers of sulphur, with quicklime. The mixture is made by boiling 1lb. of sulphur with 2lb. of quicklime in 4 gallons of water; then to every 4oz. of this add 2oz. of soft soap and 1 gallon of boiling water, thoroughly mixing them and keeping the whole stirred when in use. When ready, it may be applied to the bark with a stiff brush and well worked in. This will be found a cheap and effective preparation.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Herb Garden.—Seeing in your issue of THE GARDEN for January 10 a request by one of your correspondents, "Herbs," for advice upon making a herb garden, and being myself interested in making such a garden, I feel I must let him know of an excellent and most charming book entitled "The Herb Garden," written by Mrs. Bardswell and published at 7s. 6d. by Messrs. Black and Son, which has been of the greatest service to me. The book is illustrated in colour, and is full of useful and instructive information, giving lists of many herbs, &c., which the average person would know nothing about, and also the uses to which these can be put. There is so great a charm about the very words "herb garden" that it is most pleasant to find the old love of this phase of gardening reviving. Your correspondent is indeed fortunate to have his herb garden given to him. —GARDEN LOVER.

The Bird of Paradise Flower.—This is the popular and appropriate name given to the South African genus *Strelitzia*. The most magnificent species is *S. Regina*, with large orange and purple flowers of gorgeous colouring. This species and its beautiful variety *citrina* are now to be seen flowering in the Mexican House at Kew, where their striking appearance never fails to arouse the interest of admiring visitors. *S. Regina* was grown at Kew as far back as 1773, but at that time it was not a success, owing, no doubt, to the fact that the roots were confined in flower-pots or tubs. In 1795 a plant flowered for the first time in the Apothecaries' Garden at Chelsea. Here the plant seems to have fared better, owing to its roots having extended by accident into a bed of rotten tan. When planted out in the beds of a warm house or stove, *Strelitzias* grow and flower freely, providing they receive a fair amount of sunshine. The genus is related to *Musa*, and it is interesting to note that in South Africa the seeds of *S. Regina* are eaten by Kaffirs.—C. Q.

Perpetual-Flowering Carnations.—

I was attracted by the note on Carnations, page 24, issue January 10, by Mr. R. P. Brotherston, and particularly by the paragraph wherein he states that propagation begins early in October. While this may answer in Scotland, I venture to state that all the most famous commercial growers will admit that October and November struck cuttings do not make such profitable plants as those struck in December, January or February. At the last conference of the Perpetual Flowering Carnation Society, and also at the one in December, 1912, Mr. C. Engelmann and others stated that they were convinced that the later-struck cuttings were the best from all points of view. Mr. C. Allwood, easily one of the most expert writers on Carnations, explains the why and wherefore, and it is simply this: October cuttings have two dull declining months ahead of them, and during this period they are weakening, not gaining strength. Late December and later cuttings

have brighter days before them. They go ahead and gain strength with the lengthening days, and never look back. Mr. Engelmann publicly stated that his tests over two years proved that January-struck cuttings will give a far larger crop than October or November struck plants.—T. W.

Colour Effects with Annual Flowers.—The coloured illustration of annuals given with January 3 issue presents some problems worth consideration. The pink and rosy carmine on the right are charming, but rendered as a whole less effective by the intrusion of the white *Godetia*. The most faulty part of the composition, however, is the deep blue at the edge. Had cream been used instead, the whole would have been sweetened. Blue, to have been effective with the other colours, should have been very light, or, best of all, mauve, and preferably introduced near the back. The grass verge is too narrow, and at the very least

little more striking, and was as follows: A number of the largest available tubers were selected from some maincrop Potatoes in spring. These were spread out on trays, and the young growths picked off every fortnight till the first week in August. At this date some old potting soil, moderately damp, was got ready, also a good-sized packing-case. A layer of soil 2 inches deep was placed in the bottom of the box, and on it tubers were laid 2 inches apart from surface to surface, and this was repeated till the case was filled, finishing off with the usual layer of soil. The case was then placed in an outhouse and allowed to remain there till the Potatoes were wanted at Christmas-time. The case was then emptied of its contents by being turned upside down, when it was found that the old tubers (now shrivelled up) had, without the aid of leaf, stem or light, produced a fair crop of nice young

tubers, dry and mealy. I may say that in both cases the tubers had the flavour characteristic of young Potatoes grown under normal conditions. I am aware that these methods are not new, but they do not appear to be generally known.—CHARLES COMFORT, *Midlothian*.

Two Excellent Kales.—There are two varieties of Kale that do not seem to be generally known, but that are both of such high merit that they should be in every garden where the best vegetables are appreciated. The Marrow Kale is for summer and autumn and until frost comes, for it is not very hardy. The stem is the part eaten. The leaves of a coarse kind have long been used as cattle food, especially on the Continent; but the garden kind, cut before the stem has become hard and fibrous, is a truly delicious vegetable. In taste it is much like Kohl Rabi, but is more tender in consistency and more delicate in flavour. The stem is nearly two feet long, a little swollen in the middle of the length. To prepare it for table the outer skin is cut off, and the stem, which will now be about an inch in diameter, is cut across in sections rather less than a quarter of an inch thick, boiled in salted water and served with a thin white sauce. The other kind is the Russian Kale. What is now offered must be a recently much-improved kind, for in that admirable book, "The Vegetable Garden," by Messrs. Vilmorin, it is described as worthless. Certainly the vegetable I am now

enjoying, and which I grew, together with the Marrow Kale, by the advice of a representative of Messrs. James Carter and Co., who sent me the seed, is quite the best of the several kinds of Cabbage I have now in the garden. It has a tender texture and an excellent flavour, with that pleasant sweetness that the hardy Cabbages seem only to acquire when they have felt the frost. When half grown the Russian Kale has a curious appearance. The earlier leaves have hardly any blade, and the whitish ribs and nerves stand out like the branches of stags' horns. Now it has the central rosette of more normal Cabbage form, which is the edible part. This and the succeeding sprouts will be of great value through the winter, for it is extremely hardy. During the recent trials at Wisley the Russian Kale received high honours.—G. JEKYLL.



A BIRD OF PARADISE FLOWER (*STRELITZIA REGINÆ CITRINA*) NOW FLOWERING IN THE MEXICAN HOUSE AT KEW.

should be twice the width. A deep blue might have been used on the left border, but there also well to the back. On the whole I would incline to banish blue from both borders. I wonder how the compositions strike others who have given colours some attention.—R. P. BROTHERSTON, *Prestonkirk, N.B.*

New Potatoes in Midwinter.—We have had a considerable supply of new (or young) Potatoes during the recent Christmas season, the supply being produced by two distinct and simple methods. The first was by filling biscuit tins with young Potatoes in July. After putting on the close-fitting lids, these were secured in position by means of a piece of lacing wire. The tins were then buried 2 feet deep in the ground, where they were allowed to remain till the Potatoes were wanted. The second method employed was a

The Gold Mohur Tree.—In your issue of the 3rd inst. I find that "G. D." has enquired about the Gold Mohur tree. I know it by appearance very well; it is one of the sights of the Shiny East. I am nearly certain that it is a variety of Poinciana, but I have no books on Eastern botanical subjects, so am unable to verify my assertion. I am inclined to believe that it originally came from the West Indies, but it is found in the cities of India and Ceylon.—P. TILLARD.

Protecting Alpines in Winter.—The rockery as a feature of artistic gardening has come to stay, but the satisfaction of picturesqueness is often nullified by the high mortality among choice plants during the ever-changing climatic conditions of our long winters. Frost is not a danger for serious consideration; but rain, stagnant water and a cold, sodden soil spell ruin to many of our finest plants. I have found that an excellent method of keeping down the number of losses is to scatter gravelly matter round those that I prize most. I have even gone the length of wedging small whinstones, such as are used for roads, round the necks of some plants, and I never yet had cause to regret the time taken up in the work. Keep the foliage off the cold soil, which is almost continuously soaked during these months; see that the "neck" of each plant is kept erect, and the result will be most satisfactory. By careful work of this kind I have managed to keep such dainty little subjects as *Saxifraga Griesbachii* and *S. Stribnryi*, as well as many others, while my nearest neighbour finds that he needs to get a new stock every spring.—CRAIGIELEA, *Glasgow*.

Thatched Cottages.—In reference to the paragraph on page 1 of January 3 issue, while I yield to no one in appreciation of the æsthetic virtues of thatch and detestation of the many ugly modern buildings of all sizes, I think it should not be overlooked that there are some thatched buildings too intimate knowledge of which would certainly entail disenchantment. Thus, I remember a very agreeable railway journey in company with a large family of countryfolk, during which a chance remark in praise of thatch elicited the information that they had suffered greatly from the combination of a sieve-like thatched roof and a miserly landlord. Also I have heard quite alarming stories bearing upon thatch as a harbourage for fleas, and from time to time one reads most harrowing accounts of how quickly fire spreads in a village of thatched roofs. Certainly the question of roofing material seems to me pre-eminently a matter for cottagers to decide for themselves, though there can hardly be a doubt that such people as touring motorists (who are responsible for such serious new discomforts to villagers) would be one and all enthusiastic "thatchites." I really must venture to dissent from the description of the fine large house illustrated on page 9 of your issue of January 3 as a "cottage" (unless, indeed, it refers to the wholly dwarfed edifice faintly discernible in the background). I am, of course, well aware that established usage can be pleaded for calling houses "cottages," which, to my idea, bear about as much resemblance to the genuine article as a pigsty does to a palace; but is it not a most foolish affectation?—ARTHUR GARNETT, *Kew*.

FORTHCOMING EVENT.

January 27.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

THE value of Chrysanthemum blooms in December and at Christmas-time is very great. In some seasons they are of more value than in others. Notwithstanding the fact that the past month has been a favourable one for flowers of various kinds, those of the Autumn Queen have been more appreciated than ever, and the quality of the blooms has been higher, too. I think the principal reason for the high quality and general good appearance of the flowers is the fact that more cultivators have restricted the number of varieties grown and had more plants of each.

Scarcity of Cuttings.—There was a general scarcity of cuttings on the old roots of many varieties last year, notably on those grown for late blooming. The old stools must be carefully preserved on high shelves in greenhouses or in cold frames. If space cannot be spared for the old plants in their large pots, carefully turn out the balls of soil, remove the drainage and reduce the balls quite two-thirds. Then pack them close together in boxes about six inches deep, filling up all spaces with a compost of sand, sifted loam and leaf-soil. Make it moderately firm, water through a fine-rosed watering-can, and place the boxes in a warm position in a greenhouse. I have often secured a nice lot of sucker cuttings in the way described from old plants that seemed to be quite hopeless. Amateur cultivators who like to grow a good batch of plants for the supply of cut flowers at Christmas-time should now duly note how the varieties they have grown this season have succeeded. Then any failures experienced can be avoided another year. The following are

Splendid Varieties for the production of blooms late in December, at Christmas and during the first half of January: Mme. Oberthur, white; Helena Williams, a pale yellow sport from the latter; Mrs. David Syme, pure white, greenish centre; A. J. Balfour, a lovely pink, compact blooms; December Gold, mid-December; Mrs. H. Turner, velvety crimson (when the plants are pinched they branch freely); Mary Thorpe, soft pink, easy to grow as a bush, on which two dozen blooms may be grown; Niveus, a good white; Queen of the Exe, pale blush, the plant lifts well; Thorpe's Apricot, a lovely flower for table decoration; and Souvenir de Scalarandis, deep bronze, one of the best for planting out and lifting. A good companion to the variety A. J. Balfour is Thorpe's Christmas Rose, which is a deep rose pink in colour. William Turner, if grown as a bush, would come in early in December. For Christmas-time and a week or two later Western King, pure white; Nagoya, a deep golden yellow that keeps well; Baldock's Crimson; Mrs. Greenfield, golden yellow, reflexed blooms; Mrs. J. Thompson, pure white; and Embleme Poitevine, an incurved, pure yellow, should be grown. If two yellows and two whites only are required, then select Embleme Poitevine, Nagoya, Mrs. J. Thompson and Western King. It is important to commence with good sturdy cuttings that are produced from the base of the old plants, and to avoid stem cuttings.

AVON

THE WINTER SPRAYING OF FRUIT TREES.

THE practice of spraying is becoming much more common than formerly. Fruit-growers are realising the importance of the work when carried out properly. They find, when spraying is done systematically during the winter, spring and summer, that the trees give much better results. There is no doubt that if spraying and other preventive measures to check the spread of various insect pests and fungoid diseases were made compulsory by Government, all fruit-growers would benefit to a considerable extent.

Spraying while the trees are dormant is an excellent time for the inexperienced to make a start, as there is not the same risk as when the trees have made leaves, although there is not the slightest reason why an injury should be done to the most delicate tree if the instructions given are carefully carried out.

Several home-made sprays can be employed at this season with advantage, and as some prefer to prepare their own washes, I will give a few simple recipes for the removal of moss and lichen from the trees, also of such pests as eggs of the winter moth, woolly aphis, mussel scale, ova, Apple blossom weevil, oyster-shell bark lice, earwigs and the caterpillar of the Codlin moth in its cocoon.

Lime-Wash.—One of the most safe, efficacious and easily applied is quicklime. Not only does lime cleanse the trees of moss and other extraneous growth, but it is valuable as a stimulant to crops growing underneath the trees, as well as being beneficial to the trees themselves, especially where lime is deficient in the soil. In sandy soil, or in that with a gravel or clay subsoil, lime is largely employed by fruit-growers for the double purpose. The best hard-stone lime is necessary, as obtained from Buxton; not that which is soft, as is sometimes the case when made from some kinds of chalk. Eighty-six pounds of lime are sufficient for fifty gallons of water. This amount of lime should be put into a galvanised vessel, adding a small quantity of water to start the lime dissolving. As this proceeds add more water, constantly stirring the whole with a shovel, never allowing it to become quite dry nor making it too wet. Just keep it sufficiently thin to stir and become regularly dissolved. When this has taken place, strain the whole through a fine sieve into another vessel to remove any small portions that may tend to choke the pumps or spray nozzles. Add water sufficient for the quantity noted. There are various times when lime spraying can be done. Some begin in November and December, others not until the buds are bursting in spring. In my case I usually begin the second week in April. A large grower of Plums near here does not spray the trees until the blooms are fully developed, and although many persons would be afraid to do this so late, I can assure readers there is no danger in so doing. The kind of sprayer to use is purely a matter of choice. I prefer one with a pneumatic action, which leaves both hands at liberty to work the sprays. Various lengths of hose and lances are required, according to the height of the trees to be sprayed. Practice will soon teach a person how much liquid to use in coating the trees. It is surprising what a small quantity is required to cover a branch. The clusters of spurs and cankered portions—if any

should be carefully covered, as it is in such hiding-places that the insects lurk. A spraying syringe answers well where only a few trees have to be done.

Copper Sulphate makes a capital winter wash for Apple scab, which is one of the worst enemies the Apple-grower has to contend with. Dissolve 2lb. of copper sulphate in 50 gallons of soft water. This is a cheap wash, and will kill all fungus with which it comes in contact. In applying this wash, use a fine nozzle, making a thin spray and thoroughly forcing the liquid into any cankered parts.

Lime Soda and Salt Wash is easily made and applied, and prevents the hatching of the eggs of Apple sucker and Plum aphid, and also cleanses the trees of moss and lichen. The quantities are 1½cwt. of good hardstone lime, 35lb. of agricultural salt and 3lb. of common washing soda to 100 gallons of water. Slake and strain the lime through a fine sieve, dissolve the soda in hot and the salt in cold water, adding both to the strained lime. February is early enough to commence this spraying, continuing until the buds are ready to burst; then cease.

Woburn Wash.—What is known as the Woburn wash, and an effective one, is applied from November until the end of February. It is made as follows: Caustic soda, 1½lb.; copper sulphate, 1½lb.; lime, ½lb.; paraffin emulsion, 5 pints; water, 10 gallons. Dissolve the copper sulphate in 6 gallons of water and slake the lime in 3 gallons of water. The dissolved copper sulphate should be run through a fine sieve to remove any portions of a gritty character. Then add the paraffin emulsion and stir them together, adding the caustic soda previously dissolved and sufficient water to make 10 gallons. The paraffin emulsion requires careful preparation. Boil a gallon of skim milk gently, adding 2 gallons of paraffin by pouring it gently into the middle of the milk, but not in sufficient quantity to take the milk off the boil. Add 1½lb. of soft soap, gently whipping it up in the middle of the vessel. Keep it away from the side of the vessel, as it is so liable to burn.

Of prepared washes which I know to be effective and which are no trouble to prepare, Bentley's Concentrated Alkali Wash is most efficacious in cleansing the trees from moss and lichen, rendering the bark quite bright and imparting a dark colour to it. In using this mixture I would caution users not to drench the trees unnecessarily with it, especially standards, because the stems become too saturated with the wash running down, collecting as it does from the branches to the stem, and, of course, the older the tree the more numerous are the lodgments in the stem for the wash to collect. Simply moisten the whole of the branches with a fine spray that is sufficient for the purpose. Dissolve the contents of one tin in 15 gallons of slightly warm, soft water.

Bishop's Waltham, Hants. E. MOLYNEUX.

A BEAUTIFUL BARBERRY.

BERBERIS POLYANTHA.

THIS ornamental Barberry was introduced a few years ago from China by Mr. E. H. Wilson, who describes it as one of the best flowering shrubs in the whole of the Berberis family native of China. A deciduous species, *B. polyantha* grows 5 feet to 10 feet in height, forming a large, much-branched bush. The leaves grow in clusters, pleasing light green in colour, obovate, and about an inch long. The attractive golden yellow flowers are borne in fairly large panicles, which are 6 inches or more in length. These are followed by numerous



FRUITING SPRAYS OF THE NEW BERBERIS POLYANTHA. THIS IS ONE OF THE MOST BEAUTIFUL SPECIES OF ITS FAMILY.

rather small coral red fruits, which hang on the bushes into the New Year, long after the foliage has fallen. It thrives under similar conditions to other members of the family, and is readily raised from seeds. Mr. A. E. Pratt, who collected herbarium specimens in Western China during 1889 and 1890, appears to have been the first to discover the plant, though it was apparently left to Mr. E. H. Wilson to introduce the first plants to our gardens. He collected seeds at an altitude of 6,000 feet to 10,000 feet on the uplands of the Chino-Tibetan borderland.

COLOURED PLATE.

PLATE 1485.

RAISING TUBEROUS BEGONIAS FROM SEED.

TIME was when tuberous Begonias were largely increased by means of cuttings, but now the art of seed-saving has become such an exact science that the single varieties can be practically obtained true from seed. For the choicer double forms propagation by cuttings is still followed, but seed saved from a good collection will yield a large percentage of fine double flowers such as are invaluable for purposes of decoration, either indoors or out. Begonia seed may be sown any time during the first three or four months of the year; but where the plants are required to yield a good return of blossoms during the summer of the year in which they are sown, this operation must be carried out in January or February. The pots or pans must be perfectly clean and effectually drained to within 2 inches or 3 inches of the surface.

The Best Soil for Seed-Sowing.

—A suitable compost for the reception of the seeds may be formed of two parts of good friable loam to three parts of leaf-mould, with a liberal sprinkling of sand or equal parts of leaf-mould and loam and sand combined. This material must then be thoroughly rubbed through a sieve with a quarter of an inch mesh, the rougher portions being put on one side in order to place them immediately over the drainage material. The leaf-mould used must be of good quality, and, if possible, from such trees as Oak and Beech. It will be a very great advantage to thoroughly sterilise the soil before using. The prepared compost which has passed through the quarter of an inch mesh may then be put in its place to within half an inch of the rim of the pot. It must be pressed down moderately firm and made level, but not patted hard on the top, as is so often done. Next pass a little of the prepared soil through a sieve with an eighth of an inch mesh, and finish off the pots or pans with a layer of this finer material. The soil must then be thoroughly watered, which may be done by means of a very fine rose; but a better plan is to stand the

pots or pans in a vessel of water, which must be below the rims of the receptacles. In this way the water will slowly enter by the hole in the bottom and gradually soak through the whole of the soil. After the seed is sown, watering must be done in the same way, as by this means the minute seeds are not disturbed in the least.

Sowing the Seed.—The pots having been prepared and watered, the seed should be sown while the surface is still wet, and on this the tiny seeds will at once adhere. Great care must be

taken not to sow too thickly, to obviate which some cultivators mix a little very dry and fine silver sand with it, while others prefer to sow direct without this mixture. From its minute character the seed will not need covering, but a sheet of glass may be laid over the pot till germination takes place.

After-Treatment.—The pots must then be placed in a structure with a minimum night temperature of 65°, rising, of course, during the day. If the weather is genial, the soil may require no more watering till the young plants appear; but in any case, if watering is needed, it should be done as before directed.

The Seedlings.—As soon as the tiny plants are large enough to handle, they must be pricked off into other pots, pans or boxes. These should be prepared in much the same way as for the sowing of the seed. The operation of pricking off is an exceedingly delicate one, and is best accomplished by using two pointed sticks about the size of a pencil. In one a notch should be cut in the shape of a narrow V. This must be manipulated by the left hand, its use being to lift up the tiny plant and place it in a hole previously prepared by the pointed stick held in the right hand. This must also be used to press the soil around the roots. When a pot is finished, it must be watered as before and returned to the warm structure whence it has come. Shading from bright sunshine will, of course, be necessary, but particularly so till the roots take possession of the new soil.

The Young Plants.—As the young plants develop they must, when sufficiently advanced, be potted singly into 2½-inch or 3-inch pots, using much the same compost as before, but it need not be sifted so finely. They must not be allowed to get pot-bound, and for their next shift a larger proportion of loam may be added to the compost. Before bedding-out-time the plants should be gradually hardened off, at which period they will, if they have done well, be good, sturdy examples in 4-inch pots. From these pots those intended for bedding may be planted out; but where required for greenhouse decoration, they must be shifted into larger pots. If carefully attended to, they will flower throughout the summer and well on into the autumn. The principal pests that attack tuberous Begonias are aphides, the Begonia mite and eelworm. Aphides can be readily destroyed by fumigation or vaporising, while this latter, if persisted in, will keep the mite in check. This mite is a most insidious foe, as it often does irreparable damage before its presence is suspected. Badly affected plants should be dipped in some insecticide into whose composition nicotine enters largely. Eelworm, which has been a good deal in evidence within the last few years, is present in the soil and makes its way into the tissues of the plant. The potting soil should be sterilised in some way or other. A very simple method was given by Mr. C. F. Langdon of Bath in his paper read at a meeting of the Royal Horticultural Society last August, namely, to mix a 4-inch potful of newly slaked lime with every eight bushels

of soil, well mixing it a few days before using. He advised the use of a little more lime on suspected soils.

H. P.

[The plant from which our coloured plate was prepared was kindly furnished by Messrs. T. S. Ware, Limited, of Feltham.—ED.]

A LITTLE-KNOWN ORCHID.

PAPHINIA CRISTATA.

THE Orchid family contains many remarkable species and varieties. Many of them are of a very complex structure, and some are of surpassing beauty. The singular-looking species illustrated on this page may perhaps be considered more curious than beautiful. It is, however, of very striking appearance. The flowers on the outside are more or less white, but within they

SOME USEFUL PLANTS FOR THE ROCK GARDEN.

ERODIUMS OR HERON'S BILLS.

THE genus *Erodium* does not seem to be cultivated in the alpine garden so much as its beauty and decorative value justifies. While some species are inclined to be tender—or at least liable to vanish during our miserable winters—very many of them are by no means difficult to cultivate, provided we give them very gritty soil from which all surplus moisture readily drains away, and a position open to the sun all day. When visiting Geneva last summer I was much struck by the varied species of *Erodium* grown by M. Dallinges at



A RARE ORCHID (PAPHINIA CRISTATA). THE FLOWERS ARE BANDED AND STRIPED IN DEEP, CHOCOLATE PURPLE.

are interruptedly banded and striped with deep purple or chocolate maroon.

Moreover, the flowers are crested—hence the specific name *cristata*—and the heavily lined sepals and petals are from 3 inches to 4 inches long.

This plant has in recent times created a good deal of interest among lovers of rare Orchids, and last July it was granted an award of merit from the Royal Horticultural Society when shown by Messrs. Charlesworth and Co., Hayward's Heath. It is not, however, a new species, for it was introduced from Trinidad as long ago as 1834.

In common with many other orchidaceous plants, *Paphinia cristata* has the misfortune to possess many synonyms. In addition to its present name it has been placed under the genera *Maxillaria* and *Lycaste*, although the specific name *cristata* has been applied in all instances

Chêne-Bourg, a suburb of that beautiful city, and later I obtained a collection from him. For their reception I rebuilt a portion of my tiny garden, putting in, at a depth of 2 feet, a layer 6 inches thick of burnt ballast the size of chickens' eggs, and above this a compost of loam, sand, burnt ballast grit, and old mortar, in about equal proportions, in addition to a small quantity of leaf-mould.

Among the species which are thriving apace under these conditions are *Erodium chrysanthum*, *E. Guiccardi*, *E. daucoides* (the Carrot-leaved *Erodium*), *E. macradenum*, *E. sibthorpiatum*, *E. corsicum*, *E. supracanum*, together with its beautiful white form, and *E. trichomanetolium*. As will be seen from the illustration on page 34, the foliage of the last-named plant is very dwarf, compact, and somewhat glaucous; indeed, under certain conditions of lighting it is quite silvery. The

flowers are white, with five rosy purple veins on each of the five petals. The two upper petals display a silvery black blotch at their base, and upon these the veins are very pronounced. During the end of May, through June and July until August, the flowers were produced in quantities, while seed was formed from every blossom.

One very interesting feature in connection with many of the *Erodiums* is the way in which the angle of the flower-stalks varies after the embryo fruit is pollinated. As a rule, the flowers are produced in clusters of five upon short stalks, rising from the upper part of a rigid main stalk some 5 inches or 9 inches long; and when they open they are in the same plane as this main stalk, viz., pointing upwards. After the fruit is fertilised, the short footstalk bends from the point of juncture at a right angle (sometimes even more than 150°), while the fruit itself also alters its angle upon the

ROSE-GROWING IN TOWN GARDENS.

GOOD red Roses are still scarce in the Hybrid Tea section, despite the efforts of the principal raisers to fulfil our requirements. It would seem now, however, that we are within measurable distance of having our desires gratified in this respect. Readers of Mr. Molyneux's interesting "Notes on the Newer Roses" will have observed his unstinted praise of George Dickson. Everything seems to point to this variety becoming the most popular red for town as well as country, and I have heard nothing but praise of it yet. Of Edward Mawley great things were expected, but it has proved disappointing.

flowering. G. C. Waud, Leslie Holland and Château de Clos Vougeot are all beautiful Roses but cannot be recommended for towns. Grusen Teplitz should be grown as a free bush and left practically unpruned. Under favourable conditions it is then good, both early and late. Only those with ample space should plant it.

The Lyon Rose is one few gardeners would care to be without. It may not be all that a town Rose should be, but one can forgive its few faults for its numerous virtues. Betty is quite a good Rose to grow, as is also Earl of Warwick, which is especially good in autumn. These Roses of combined yellow and pink shades always commend themselves, particularly to ladies. Usually they are rather variable in colour, hot weather fading the yellow in them until it is hardly perceptible. Betty has few and long petals, while Earl of Warwick is full. Both can be exhibited. Pharis-

säer and Mme. Leon Pain are also rather alike in colour of the Chatenay type. Both are excellent town Roses, the last named being the better for the garden, of deeper colouring and more profuse in flowering, though Pharisäer produces rather larger blooms. Lady Ash-town, in many other respects ideal, is badly subject to mildew, but those who can cope with this should always grow it. Colour and shape are both exquisite.

Princess Marie Mertchersky is a satisfactory Rose that always seems to come well, and Mrs. Theodore Roosevelt is also of perfect shape. Both are good, but not comparable with Mme. Leon Pain, for instance, in point of freedom of flowering. Of light pinks, Augustine Guinoisseau is most satisfactory for bedding. Lady Ursula would be far more useful if it were not so reluctant to open its flowers, those on the smaller shoots being practically useless.

Those who grow for exhibition will find it necessary to supplement the kinds named, or as many of them as they may choose, with a number that are less satisfactory in growth or do not flower freely. Bessie Brown, Dean Hole, Mildred Grant, Florence Pemberton, William Shean, Oberhofgärtner Terks and Mrs. J. H. Welch are among those best suited for this purpose. Though they cannot be called town Roses, these will yield some magnificent blooms if tended carefully; but many of them will show signs of going back, and it is necessary to replace such plants frequently. Many people like to have a few large bushes from which quantities of bloom may be gathered. The Bourbon Roses and their hybrids are excellent for this, the best being Zephyrin Drouhin, Mme. Isaac Pereire and Mrs. Paul Rugosas, of which the best is Conrad F. Meyer, also do well in towns, but the blooms are not lasting. The last named is a strong and vigorous grower, that is well adapted for training over a high fence where a screen is needed. The principal Hybrid Perpetuals for town gardens will be discussed in the next article, which will appear in the issue dated January 31st.

P. L. GODDARD.



ERODIUM TRICHOMANÆFOLIUM, A DWARF HERON'S BILL WITH WHITE FLOWERS AND CURIOUS SEED-PODS.

footstalk in such a way as to still point directly upwards, though distant from the unopened flowers by the length of the short stalk (usually about an inch), this leaving ample room for the later flower to expand. I imagine this curious movement (which is very decided, and in no way connected with drooping from the increasing weight of the fruit) is to displace the very large, spear-like seed-pods as far from the buds as possible, thereby preventing the latter from hindering the opening or pollination of the former as far as possible.

Owing to the beautiful downy character of the foliage of many of the *Erodiums* and their intense dislike of moisture about their crowns, it is advisable to place a piece of glass a few inches above them during our sodden winters, especially if the district is subject to fogs, which often bring down much dirt upon the plants.

R. A. MALBY.

Richmond should be in every garden. It grows freely, if not very vigorously, and flowers as continuously as any Hybrid Tea, which is saying a good deal. Unfortunately, it is rather subject to mildew, and the second and succeeding crops of bloom are apt to be of poor quality unless the plants are well looked after in the matter of feeding. Like Mrs. W. J. Grant, this is a Rose that requires and deserves extra nourishment. General Macarthur, almost equally free-flowering, has a sturdier growth and better constitution, but the bloom is not nearly so shapely. Neither can be called an exhibition variety, though Richmond occasionally produces a flower good enough to show. Avoca is splendid in colour, size and shape, and makes tremendous growth; but, unfortunately, it blooms but once. Every exhibitor should have it. Laurent Carle shapes well, but does not open freely enough, nor can it be called free-

IN A HAMPSHIRE GARDEN.

SOME OF THE NEWER CLIMBING ROSES.

REALLY good climbers are the scarcest of all Roses, and the hybridist has plenty of scope in this section. The really perpetual climbers are few and far between, and any new Roses that appear under this heading are apparently limited to climbing sports of the Hybrid Teas and Teas. They have the not inconsiderable drawback that every now and then they refuse to climb and revert back to the dwarf plants or parents. The wichuraianas provide us with most of our new climbers, and they are, for the most part, only seasonal flowerers, giving us a great show of blossom, it is true, but only for a few weeks of the year. Perhaps it will be convenient to deal first of all with the new varieties of this section.

Aviateur Bleriot (Fauque et Fils, 1910).—This is an excellent colour in the bud and young flowers that are produced in small clusters; but it is not, so far, with me a very strong grower, and would seem to be best fitted for a pillar or wall rather than for an arch or pergola. The foliage is pretty and persistent, but the flowers are only medium size, of a good saffron yellow, with a fair number of petals. I think I prefer both Shower of Gold and Klondyke to this variety.

Coronation (Turner, 1912).—This is a fine glowing colour, but the crimson-scarlet flowers are streaked or splashed with white; a very vigorous habit of growth, and the large trusses of flowers are very effective as seen from a distance. This Rose improves on acquaintance.

Ethel (Turner, 1912).—A semi-double flower of flesh pink shade. Like Coronation, this can be described as a very vigorous grower. It did not flower very freely with me last year; but perhaps it had hardly got established.

Klondyke (Paul and Son, 1911).—Pale primrose yellow flowers; but I shall be forgiven, perhaps, if I state that the beauty of the plant lies in the foliage. It is well worth growing for its foliage alone, and I can very strongly recommend it to all table decorators. I had to place an embargo on it in my garden, or there would have been no plant left. It has been described as an improved *climber*, but with me, so far, shows no signs of that Rose's vigorous growth. But here again it is, perhaps, hardly fair to form an opinion on one year's experience. There is no doubt, however, at all about the beauty of the plant

Southampton.

HERBERT E. MOLYNEUX
(To be continued.)

A NOBLE BORDER PLANT.

EREMURUS HIMALAICUS.

OFT and again the Eremuri have been recommended for grouping, and surely no greater tribute to their worth in that direction could be adduced than that afforded by the illustration accompanying these notes, which is from a photograph taken in Colonel H. Moore's garden at Higher Woodcombe, Minehead, Somerset. Of still greater



SEEDLINGS OF EREMURUS HIMALAICUS, THREE YEARS AFTER PLANTING, IN A SOMERSET GARDEN.

value, from the gardening point of view, is the fact that the group shown in the picture is still a youthful one, seeing that it was planted only three years or so ago, the plants at the time being seedlings of comparatively small size. Hence the picture demonstrates not only the value of grouping, but equally that of planting such things in the early stages of their existence. Then, from the suggestive standpoint comes the

important gardening lesson of all, viz. that we should raise seedlings of these things if our gardens are to afford us the picture groups these noble plants are capable of giving. Too often to-day, it is to be feared, the amateur ignores the seeds, the original clump continuing to yield but a tithe of the flower-beauty that might have been, had a few generations of seedlings been raised and planted from time to time.

It is not that we require them everywhere in the garden, so that the eye meets them at every turn, but rather that they should play their part alone—albeit boldly and in proportion to their merits—in shrubbery or sheltering bay, on the confines of woodland or park, or, indeed, any place where there existed a foil capable of throwing into fullest relief their unique beauty. In arranging such groups an item of the utmost importance is that of shelter—shelter, not so much from the winter's intenser cold, as from the ill-effects of nipping frost or withering blast of spring. Hence protection from north and east becomes a sort of necessity because of the early appearing of their somewhat tender leafage. In every other respect the plants are absolutely hardy; their great crowns might even protrude from the soil and suffer no injury in times of severest frost, though we are prone to give them a protective covering at such a time. The presence of a suitable foil as a means of reflecting the fullest beauty of these plants has already been remarked upon, though of not less worth is the surrounding greenery to their leafless flower-stems. Occasionally one sees these Eremuri rather closely associated with dwarf shrubs about their bases, and the idea may easily be carried to excess, to the detriment of both. Radiating like the spokes of a cart wheel from a common centre and somewhat shallowly placed in the ground, interference with the shrubs may cause serious mutilation to the roots of these plants. For this same reason of superficial root spread I am of opinion that the ordinary herbageous border is not quite the place for these Eremuri, though one sees them not infrequently so placed as isolated specimens. Such plantings, however permissible a decade or two ago, should find no place in gardening with these plants to-day, when, with fuller knowledge of them, they are worthy of the best the garden or woodland affords. A

peculiarity of these plants, in common with Asphodel, Anthericum and the like, is that they form crown upon crown to such an extent as to presently lift themselves to the surface, strong growing subjects like the Eremuri, because of their great crowns and thong-like roots, soon revealing their positions by the uplifting of the soil alone. The only remedy for this state of thing is replanting, which should be done in October

From the foregoing remarks it will be noted probably that a greater superficial area of soil rather than a great depth is necessary for these plants, and the deduction would be fairly correct, though soil depth must not be ignored. In planting the Eremuri it is well to remember that in flowering they afford a succession for some weeks, the white-flowered kind so well portrayed in the illustration being one of the earliest, and Shelford, Warei (bronzy orange) and Bungei (yellow) appearing at the other end of the chain. In any attempt to raise seedlings, the important fact should be remembered that seeds soon lose their vitality; hence it would be prudent to sow the seeds a few weeks after maturing. It would be well, too, to make the sowing in a frame, and sufficiently thin that the seedlings may remain to their second year, always transplanting them in autumn when dormant.

E. H. JENKINS.

THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

(Continued from page 19.)

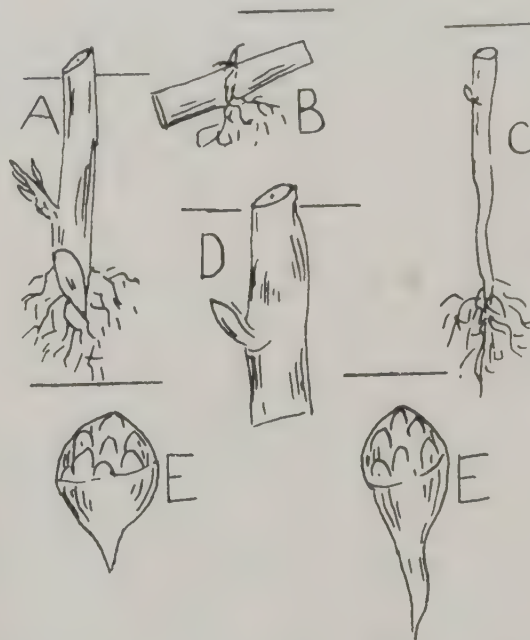
Propagation.—Many people are at sea regarding the propagation of hardy border flowers. The division of old plants and the raising of new stocks from seeds comprise the sum of their knowledge. Even such a simple operation as division has its variations. A spade, or two forks in the hands of the less clumsy, does not include all, for there are numbers of plants which give of their best only when divided carefully into very small portions. The better species of *Aconitum* should be annually divided into single crowns, the best selected and planted singly, according as they are wanted, in clumps, when 4 inches to 6 inches apart is a proper distance, or, if mixed with other plants, spaced to suit these. *Senecio tanguticus*, *Helianthus D. Dewar* and *H. Miss Mellich* should be treated in the same manner, allowing wider spaces, the first named at a foot apart being none too little. Similar treatment suits some of the fibrous-rooted section. Surely no plant is more ugly than the double *Rudbeckia laciniata* grown with many stems together and these tied to a stake, with the heads of its lovely golden flowers drooping as if ashamed of their plight. But plant these singly a few inches apart, and the need of support of any kind, as in the case of many other plants given a like treatment, is done away with, and its full beauty is displayed without any drawback.

The varieties of *Chrysanthemum maximum* afford examples of subjects which may be planted singly—just slips with one growth and a few roots to start them with, or larger pieces with several growths. These grow tall, and need support of some kind to keep them from sprawling over the border. The first named, on the other hand, are comparatively dwarf, need no stakes, and produce a broad mass of bloom of equal height. Nine inches apart is as wide as they should be arranged. *C. uliginosum* is best treated in much the same way, only the pieces must be set much closer. Several *Asters* succeed best from single growths planted close together, the *Novi-Belgii* section more particularly, also *puniceus* and *corymbosus*; but the varieties of *viminialis*, *ericoides*, *acris*, *Amellus* and *Linosyris* should have a few growths each and be planted a little wider apart. *Rudbeckia speciosa* should be annually

transplanted, but not in single growths, only the divided pieces when planted must be touching each other to afford the best effect.

Varieties of *Anthemis tinctoria* give much the best results when replanted annually, but, instead of rooted pieces, cuttings should be inserted in the autumn in a frame and transplanted in spring. These are quite as floriferous as old plants, but grow not nearly so tall, the one fault of the latter. *Erigeron* does best pulled into small pieces and planted close enough to meet when in flower; *E. mucronatus*, either from cuttings or seeds. *Nepeta Mussinii* is always best from cuttings in autumn, and so is *Pentstemon heterophyllus*, as a rule. *Phloxes* should not be over-propagated. New varieties are easily increased from root cuttings, and older ones from stem cuttings; but usually for decorative effect a plant with several stems, though the heads of bloom may be smaller, is to be preferred to the smaller ones.

Raising Plants from Seeds.—Quite a number of useful plants can be raised from seeds. Such



PROPAGATION OF HERBACEOUS PLANTS.

A—Slip of *Solidago*, *Aster*, &c., for planting close to form a mass. B—Root cutting of *Verbena venosa*. C—Root cutting of *Phlox*. D—Eye cutting of *Hollyhock*; many herbaceous plants are increased in this way. EE—Roots of *Aconitum*; plant 3 inches deep. The bars represent the soil level.

are *Delphiniums*, *Lupines* and *Agapanthus*, but the seedling *Agapanthus* must be grown on in pots till they have attained flowering size. *Heucheras*, *Dictamnus Fraxinella*, *Centranthus ruber*, *Hollyhocks*, *Isatis glauca*, *Dianthus* species, *Papaver rupifragum*, *P. pilosum*, *Gladioli*, *Sea Hollies*, *Tritomas* and *Scabiosa caucasica* constitute a selection. The double forms of *Hesperis matronalis* may be propagated either from pieces of the stems in summer or from the little root growths, which should be kept in a frame during the winter. These make the best plants. *Lychnis*, *Hollyhocks* and many other plants may also be increased from the stems, cut into short pieces. From pieces of the roots *Verbena venosa*, *Romneya Coulteri*, *Anemone japonica*, *Anchusa*, suffruticose *Phloxes* and *Oriental Poppies* are easy of increase. There is also a class of plants which, once established, may be left indefinitely without lifting and dividing. Examples of such are perennial *Statice*, *Spiraea Aruncus*, herbaceous *Pæonies*, *Tritomas*, *Helleborus niger* varieties, *Anemone japonica*, *A. angulosa*, *Dictamnus Fraxinella* and *Astilbe rivularis*. *Pinks*, *Sweet Williams*, and some of the *Mule Pinks* may be pulled to pieces in

September and the stems inserted in the ground, and all will make nice flowering plants the succeeding year.

Some perennials flower the same year if raised early and started in heat. Such are *Delphiniums*, *Lupinus polyphyllus* in variety, *Scabiosa caucasica*, *Cheiranthus*, *Pentstemons*, *Daisies*, *Chrysanthemums*, *Verbenas* and *Antirrhinum majus* varieties. These and others similarly produced are very valuable for autumnal effects, and, in a word, many plants may be increased from seeds with the greatest advantage. A few biennials are especially valuable. Such are *Campanula pyramidalis*, *Gilia coronopifolia*, *Foxgloves* (the white especially), *Canterbury Bells*, *Sweet Williams*, *Hesperis matronalis* (the single varieties), *East Lothian Stocks* in mauve, crimson, purple and white, *Lychnis Agrostemma* and *Columbines*. Some of these assume a perpetual character, but on the whole young plants are the more effective.

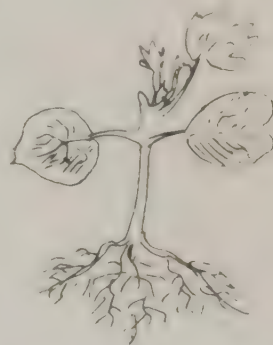
Of Annuals the number that may be used is very large, some hardy, others tender. The greater part of the last named I raise on beds of soil in cold frames, the seeds being sown early in April and afterwards pricked out into beds in reserve, to be transplanted in autumn to fill vacancies caused by the earlier plants which have done blooming. The best of these are *African Marigolds*, the doubles being separated from the singles when in flower and arranged in masses of a colour. Few autumnal flowers are more gloriously beautiful than these. The dwarf forms are usually planted in June where they are to flower, as also are *French Marigolds*, of which the deep browns, both dwarf and tall, are very effective. *China Asters* are treated in much the same manner, some being kept in reserve, others planted at once. *Dobbie's Quilled* and *Ostrich Plume* are the two sections I prefer. The old, tall *Ageratum mexicanum* gives good results if raised in heat annually. Other good annuals are *Lobel's Catchfly*, *Statice sinuata* (white and mauve especially) and *S. Suworowii* (finer than *S. spicata*). The tall form of *Alonsoa Warscewiczii* is very brilliant. *Love-lies-bleeding* and *Prince's Feather* should be sown either under glass or late in the open. The crimson-leaved form of *Atriplex hortensis* is indispensable, as also is *Kochia tricophylla*.

To these should be added *Stock-flowered* and *Emperor Larkspurs*, which are sown in boxes and germinated in heat to secure an early start, the seedlings being dibbled into their places when quite small or before the tap-roots have been formed; *Lavatera rosea* and *Clarkia elegans* (double) in various colours; *Brachycome iberidifolia*, of which white is the best; common *Marigolds*, *Anagallis grandiflora*, several *Chrysanthemums*, *Convolvulus tricolor*, *Dianthus Salmon Queen*, *Godetia Schaminnii flore pleno*, *Matricaria Golden Ball*, *Nemesia* in great variety, *Nigella Miss Jekyll*, *Saponaria calabrica*, *Scabious*, *Tropæolum aduncum*, *Xeranthemum annuum* and *Virginian Stock*. This is not an exhaustive list, but all those named possess much merit as border plants.

Prestonkirk, N.B.

R. P. BROTHERSTON.

(To be continued.)



LARKSPUR SEEDLING, SHOWING STAGE OF GROWTH TO PLANT.

THE TRAINING OF WALL FRUIT TREES.

CORDON fruit trees become increasingly popular each year, and the reason is not far to seek, for such trees are easily managed, while space is economised to the greatest extent.

The early training of the trees is usually carried out in the nursery, and when the cordons leave the nursery they should not only possess main stems as straight as gun-rods, but also be furnished almost to the ground-level with fruiting spurs. If good trees are procured from the nursery in the first place, it then requires only common-sense methods to retain those trees well trained in one's own garden. Speaking generally, cordons should be planted obliquely. The reason for planting them on the slope is that a greater extension can be given to the leaders, which should not be carried above the top of the wall. Vertical cordons should only be placed against high walls or pillars, and even then over-vigorous varieties should not be planted. A point worth noting in planting cordons is that the more pronounced the incline, the further apart should the trees be placed. Double cordons or U-shaped trees are sometimes preferred, and occasionally one sees a wall planted with triple cordons; but for all practical purposes the single cordon gives the best result. Horizontal cordons, with low branches about one foot from the soil and trained parallel to the ground, are favoured for forming edgings to borders. Growth, however, is so restricted that trees trained in this manner rarely live for very many years. Slow-growing Apples on Paradise stock are best suited for horizontal cordons. The horizontal trained tree, with branches arranged tier upon tier, is one of the best forms of trained trees for planting against walls. Should the branches on one side of the tree grow at the expense of those on the opposite side, the vigorous branches should be tied down temporarily. This will weaken them, while the weak branches may be strengthened by being raised. Much may also be said in favour of the fan-trained tree, particularly with such fruits as Morello Cherries, Peaches, Nectarines and Apricots. The illustration on this page depicts a fan-shaped Pear which, it should be noted, is splendidly furnished with fruiting spurs. The Pear, however, is one of the easiest trees to train, and will do equally well as a cordon, either single or double or horizontally trained. Another type of wall tree worthy of note is the trained standard fan. Obviously it is only suited to very high walls or buildings. On the Continent it is regarded as a lucrative way of covering the upper part of one's house.

Apples, Pears and Plums.—In pruning trained trees the object should be to make every branch a cordon, with fruit spurs along the entire length of the branch. "Once a fruit spur always a fruit spur" is an old saying among fruit-growers. In order to secure fruiting spurs it is necessary to prune hard the second season after planting, and the following season the resultant vigorous growth should be shortened to about one-third its length. Summer pruning is important. It is accomplished by pruning or pinching back lateral growths to the extent of about 4 inches in July. It should be annually followed by winter pruning, when the side growths are cut back to two or three eyes. The fruiting spurs should, of course,

never be pruned. With horizontal trained trees the leader should be cut back to within a foot of the top horizontal tier, and with cordons it may be shortened in proportion.

Peaches and Nectarines.—Unlike the Apple and Pear, these trees fruit upon the young wood, and not on fruiting spurs. The main shoots should be shortened about one foot in winter, and overcrowded growths thinned to the base. The young or fruiting wood should be retained and laid in on the upper side of the leaders only. This will ensure uniformity in fan-shaped trees and avoid the crossing of branches.

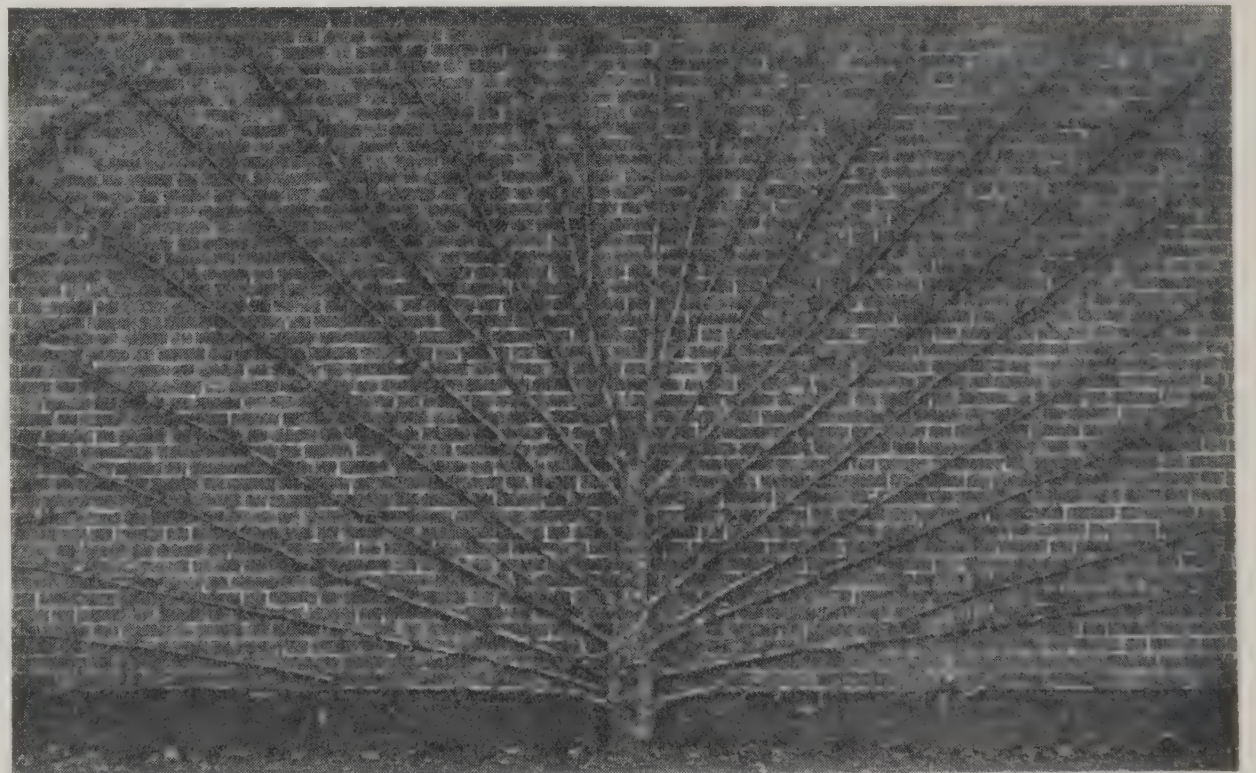
Gooseberries and Red Currants.—These fruits give capital results if trained as cordons. The terminal or leader should not be shortened except to keep the cordons within bounds. All side growths should be pinched back to three eyes in the summer.

Aspects for Fruit Trees.—Pears, Plums, cordon Apples and dessert Cherries may be given

trees against walls, the base of the trees should be brought about 10 inches forward away from the wall.

WHY SEEDS SOMETIMES FAIL.

OF course, bad seeds will not germinate under any treatment. Sometimes, however, good ones fail to do so, even when every convenience exists for their proper treatment. There are several causes for failure, namely, sowing too deeply, not deep enough, a too wet soil, and also a too dry one. Now, to be successful, the reader will at once think that the happy medium must be secured in each case. If it is, there will not be many failures; but with a certain amount of moisture we must also have heat. If seeds are sown in a very cold soil at this season, many may perish in it, especially if the soil be very wet. Seeds of the more tender kinds of plants require a warmer temperature than those of hardier kinds. Example: Cucumber seeds would decay



A WELL-TRAINED FAN-SHAPED PEAR TREE. NOTE THAT EACH ROD IS FURNISHED WITH FRUIT SPURS.

either easterly, westerly or intermediate positions. Morello Cherries and certain Pears do well from north to east, and the same aspect may be given to Gooseberries and Red and White Currants. Apricots, Figs, Nectarines and Peaches should be given a westerly to southerly position.

Planting.—The work of planting is best carried out in the autumn, but it may be successfully accomplished at any time when growth is dormant, providing, of course, that the weather is open and that the soil may be readily worked. It is a common mistake to over-manure the soil at the time of planting. Providing that the soil has been previously worked, very little, if any, manure need be applied, and even then only well-rotted manure should be incorporated with the soil. In cases where the soil is deficient in lime, the addition of a little lime rubble around the roots of each tree will prove highly beneficial; in fact, the value of lime rubble for fruit trees generally cannot be overrated. When planting trained

in the soil if given similar conditions to those of Broad Beans, but the latter would germinate quickly if treated the same as Cucumber seeds. In very hot weather—in summer-time—it is absolutely necessary to give seeds a moister soil than in January, February and March. Dust-like seeds—those of Begonias, for example—should be sown on a moist surface where coarse sand is plentiful. Celery seeds should have a quarter of an inch of fine soil evenly scattered on them; Cucumber seeds require nearly an inch of soil; Peas rather more; Broad Beans quite 2 inches; and so on. The soil must be maintained in an even state of moisture. Many cultivators cover the seed-vessels with glass and paper. If the covering is removed in good time, the young seedlings will not be damaged; but if left on too long—even a day in some cases—the seedlings are much weakened and often die afterwards. Never sow thickly, as crowded seedlings are always weakly.

SHAMROCK

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Peach Trees in late houses should be prepared for forcing with as little delay as possible. In pruning the trees all gross shoots that can be spared should be cut away, leaving the medium wood with a space of at least 4 inches between the shoots when tied, for it must be remembered that at least one young shoot will have to be tied into each space before the season is very far advanced. If the trees are infested with any insects, they must be carefully washed with a solution of some approved insecticide. The borders should be examined, and if the roots are near the surface, a sprinkling of bone-meal may be applied previous to a top-dressing of loam and old lime rubble. If the border is dry, water should be given in sufficient quantity to reach the extremities of the roots.

Late Vines.—Any Grapes that remain on the Vines should be cut and placed in the fruit-room, where they may be kept in good condition for several weeks. The ventilators should then be opened and the Vines pruned as soon as possible. Remove all loose bark without breaking the inner bark, and if mealy bug is present on the Vines, they should be carefully washed with Gishurst Compound and warm water. At the same time the interior of the vinery must be thoroughly cleaned. If any additions to the borders are contemplated, these should be made at once. It is better practice to make small additions to the border each season than to place a large quantity of soil in the house at one time, as this may become sour, and consequently the crop will be unsatisfactory.

Plants Under Glass.

Roses in pots should be pruned now and placed in a temperature of 45°. The crocks should be examined so that the water may pass freely from the pots, and, if necessary, a top-dressing of rich loam and lime rubble should be applied. If a constant supply of blooms is necessary, a few fresh plants should be introduced to heat every ten days. Good drainage and careful ventilation are of the greatest importance.

Cannas.—Old roots of Cannas may be shaken out and repotted in a compost of rich loam and thoroughly decayed cow-manure. They may be started into growth in a temperature of 60°. Seeds may be sown now in small pots for flowering the following season. These seeds are slow to germinate, and may be soaked in water with a temperature of 90° for twelve hours previous to sowing.

The Conservatory.—Various flowering shrubs should be in readiness now to take the place of Chrysanthemums. Many of these are easily forced, and may be had in quantity, providing a reserve plot is available to grow and prepare them during the summer.

The Flower Garden.

Taking Cuttings for Summer Bedding.—Such plants as Heliotrope, Verbena, Ageratum, Coleus, Lobelia, &c., may be increased to what is necessary by taking cuttings now, providing a hot-bed is available for the purpose.

East Lothian Stocks.—Now is the time to sow seeds of these lovely Stocks in order to have a display of flower in the early summer. These are frequently sown in March, when the plants do not flower till September. Cover the seeds lightly, place them in a temperature of 60°, and pot up the seedlings as soon as large enough to handle. By this means good, strong plants should be ready to put out in April.

The Hardy Fruit Garden.

The Pruning of Peach Trees.—Much of the work in this department will depend on the weather. While fine, the pruning of Peach trees should be persevered with, and while this work proceeds the whole of the branches should be detached from the wall and the old shreds burned, as they may contain the eggs of some troublesome insect. As the shoots are being replaced on the wall, a space of several inches should be allowed between them in order to admit of the laying in of next season's growth.

Raspberry Shoots may be thinned and tied to the wires at any time, providing the ground is not too wet. This is a surface-rooting plant, and requires a rich, open soil to grow it to perfection. If the soil is of an open nature, a top-dressing of manure may be applied as soon as tying is finished. If the ground is heavy, the top-dressing may be deferred till March, but the surface may be lightly broken up and exposed to the weather.

The Kitchen Garden.

Lettuce in cold pits should be freely ventilated when external conditions will permit. Stir the soil among the plants and remove all decaying foliage. Dampness is the worst enemy to all salad plants in winter. A sowing of Lettuce seed may be made in boxes, and the young plants pricked into a cold pit as soon as large enough to handle.

Early Broccoli in the open garden should be carefully protected from frost. As soon as the heads appear, the plants may be lifted with a good quantity of soil and placed in any cool structure with plenty of light.

French Beans.—A sowing of these may be made now in 7-inch pots and placed in a temperature of 60°. Pods should be ready to gather within seven weeks from the time of sowing.

Mustard and Cress should be sown weekly and placed in any forcing house or pit with a temperature of 50°.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Wood-Ashes.—Collect and burn all prunings and other garden rubbish and store in a dry shed; in fact, there should be little or nothing to cart away from any garden. Hedge-trimmings collected and burnt make an excellent top-dressing; indeed, one should always be on the look-out for all burnt refuse, as this is invaluable in preparing ground for Onions and Carrots.

Pea-Sticks.—In wet and frosty weather Pea-sticks should be gone over, sharpened and graded in different sizes. By no means destroy small branches of these, as they are very useful for supporting the smaller-growing herbaceous plants, besides being less unsightly than the ordinary garden stakes.

Early Carrots and Turnips.—Where early Carrots and Turnips are in demand, now is the time to make up hot-beds. For this purpose the best material is leaves and stable litter, about two loads of the former to one of the latter. When the bed has had time to settle, a small sowing may be made of Carrots, Turnips and Radishes. These are greatly appreciated even in a very young state.

Parsley.—As Parsley takes some little time to germinate, a sowing may be made now, so as to be ready for planting out about the end of March.

Early Potatoes.—A few early Potatoes may now be planted in slightly heated pits. I find Sutton's May Queen an excellent variety for this early work. Great care will be necessary to protect the young growths from late frosts, but at the same time avoid coddling.

Globe Artichokes.—These require to be carefully protected during this month, particularly against damp. I find the best material for this is engine ashes, not too new. Mound them up well round the crowns, and the possibilities are no other protection will be required.

The Flower Garden.

Alterations.—The weather during the late autumn and early winter was the mildest experienced for very many years, and, in consequence, those who had alterations to make on lawns or grass paths had an exceptional opportunity of forwarding that work. Should any, through stress of other duties, still have some turfing to do, no time should be lost in completing it. The present is a good time to attend to defective drains and all work that requires serious disturbance of the paths and lawn.

Rhododendrons that do not seem to be particularly happy in their surroundings will, in many instances, be greatly benefited by a good mulching of farmyard manure. Many recommend spent Hops and leaf-mould, which are doubtless good in their way; still, I have not seen anything to equal the manure. When the variety Pink Pearl was introduced, I planted a number in a cold district in the North. For a time they seemed only to exist, and, alarmed at the price paid and the consequences of failure, I sought the advice of an experienced grower. His advice was, "Try farmyard manure," which I did, and the result was beyond my utmost expectations.

Helleborus.—Where Christmas Roses are grown in quantity, a number of clumps should be protected by hand-lights, which will not only improve the flowers, but will draw out the stalks and make them more useful for decorative purposes. A few roots may be lifted, placed in cutting-boxes, and brought on in the propagating-pit.

Carnations.—During severe weather border Carnations should be protected against rabbits and voles, which are very destructive to Carnations. Even in walled gardens it is surprising how the pests find their way in. In most cases carelessness in leaving doors and gates open is responsible for their presence. To protect Carnations against such foes, a remedy I have found most effectual is to saturate string with Renardine and stretch it along the outside of the border about six inches from the ground. Support the string with small stakes, and paint it over from time to time with this mixture.

Hardy Fruit.

Gooseberry and Currant Cuttings.—Where it is intended to increase the stock of Gooseberries and Currants, suitable cuttings should be selected from the prunings. These should be straight and of a fair thickness. When the weather is such as to prevent work being done out of doors, these cuttings may be made, correctly named, tied into small bundles, and heeled in until they may be planted.

Protecting Fruit Trees.—Plantations of Apples and Pears (indeed, of all hardy fruit trees) should be guarded against rabbits and hares, especially in frosty weather. Quite recently I saw great destruction done during a storm, wall trees being barked up to 2 feet from the ground. The Renardine recommended for border Carnations will keep them at bay. In the case of fruit trees, string will not be necessary. I simply smear the foot of the stem with the mixture.

Fruits Under Glass.

Strawberries.—Early forced Strawberries will now be in flower. Go over them carefully with a rabbit's tail to ensure a good set. The atmosphere may be kept somewhat dry, but all possible means should be taken to keep down red spider, which soon makes its appearance on early forced plants.

Vineries.—Vines that were started about the New Year will be beginning to move, and the greatest precautions will have to be taken in admitting air at this stage. The sun may be shining brightly during the middle of the day, and yet the air outside be extremely cold. An increase of 5° in the temperature may be allowed. In starting Muscats I believe it is an excellent plan to top-dress the inside border with a little hot-bed material; this encourages the roots to start and has a tendency to keep them near the surface.

Melons.—Where Melons are required in May, a small batch should be sown now. Unless in very favoured districts, the early lot of Melons will cause a good deal of worry before they reach the ripening stage, chiefly through the lack of sunshine. They succeed best in a good, heavy loam mixed with a little lime rubble. Where one has any doubt of the suitability of the soil for this or other crops, he should have it analysed, which will prevent many failures.

Cucumbers.—If a sowing of Cucumbers has not been made, no time should be lost in making a start, as a few early Cucumbers are almost indispensable for the beginning of the salmon season.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)

Hoptoun Gardens, South Queensferry, N.B.

RENOVATING OLD GRAPE VINES.

A GOOD many gardeners seem to think that when once Vines begin to show a falling off in the size of bunch or berry, the only thing to do is to root them out, make a new border, and replant with young rods. This I consider an entirely wrong course to pursue, unless, indeed, the Vines are very far gone. From a fairly long experience I have learned that even quite aged Vines can be brought back to a state of usefulness if only the right method be adopted. When serving my apprenticeship—now a good many years ago—a large vinery in the gardens where I was employed got into an unsatisfactory state, and there was talk of having all the Vines rooted out and new ones put in their place. The head-gardener, however, saw that there must be a shortage of fruit for two or three years if this plan were adopted, so, instead of this drastic measure, proceeded to rejuvenate the old Vines, which must at that time have been thirty years old. This was done, and with the most gratifying results.

Some years later, on taking charge of a garden in the South of Scotland, I found two vineries in a deplorable state. For some unexplained reason my predecessor mulched the outside border each autumn with 6 inches to 9 inches of farmyard manure, and this was never removed. The result was some 9 inches of solid, rotten manure over the whole border. In wet weather to step on the border was like going on to a morass, and, as may be supposed, the sun's warmth never got near the roots. While the Vines were certainly planted inside, the great bulk of the roots had to go outside, the inside border being only 18 inches wide.

The Plan of Renovation.—During the winter I got together a large quantity of excellent fibrous turf, lime rubbish from old buildings, bone-meal and Thomson's Vine Manure. Early in February, the weather being suitable, I started to overhaul the whole border. First I removed the whole of the manure down to the soil, as it was worse than useless for my purpose. Then, starting at one end, I took out a trench 5 feet or 6 feet wide, and extending from the vinery right to the walk. Any roots found near the surface were mostly dead, so these were, of course, cut away. After going down about a foot or fifteen inches, a few live roots were found, and these were very carefully preserved. After going to this depth I could see that there was nothing wrong with the drainage, so concluded I had gone deep enough. I then spread a good layer of the turfy loam in the bottom of the trench, mixing with it a generous quantity of lime rubbish and bone-meal as it was wheeled in. (It saves time and labour to mix the ingredients as they are being used, and is quite as satisfactory in the end as mixing all together in a heap.) The roots were then laid out at full length on the new soil, and a notch made at every 9 inches to 12 inches on the under side of the large thongs. To induce the early formation of fibrous roots, a handful of fresh, light compost was placed round the roots where the notches were made. More fibrous loam, lime rubbish and bone-meal was laid over the roots, and well firmed by beating with a manure fork. A fair dressing of Thomson's Vine Manure was applied to the surface, and then 3 inches of the best of the

old soil from the second trench spread over all. This completed the first trench, and the whole of the border was treated in the same way.

Subsequent Treatment.—That season I kept back the starting of the Vines for three or four weeks, and brought them on very gradually. I also cropped rather lighter than usual, and even the first season saw considerable improvement. After the Grapes were thinned and swelling rapidly, the border got another light dressing of Thomson's Vine Manure, which was hoed in. In the autumn the border was mulched with 9 inches of fresh stable litter, and this was removed about the end of March. A fairly generous sprinkling of the artificial fertiliser already mentioned was again given and lightly forked in, while, after thinning, a rather lighter dose of the same was applied. These two dressings and the food washed from the mulching was all the feeding given, and the results were so gratifying that I would never hesitate to repeat the cure should unsatisfactory Vines come my way again. During three or four subsequent years I gave the same two dressings of artificial manure and the autumn mulch of stable litter, and the Grapes improved so much in that time that I was able to take first prize for Hamburgs at the Edinburgh Autumn Show. It may be of interest to state that these Vines, when I took them in hand, were at least forty years old.

Treatment of the Rods.—As may be supposed, most of the Vines carried very long, unsightly spurs, and, as far as I could see, the original rods had never been renewed. In a few cases I noticed buds low down on the stems; these, of course, were very carefully preserved. In due course the resulting shoots formed strong rods, which eventually took the place of the old ones. To ensure no loss of crop, I cut away only part of the old spurs on one side of the old rods to make room for the new growths, but in the end sawed away the old canes as low down as possible. The rods that failed to produce buds from the stem had to be worked by choosing a suitable shoot from the lowest spur, and these also turned out well. While February is a good time for this work, providing the Vines need not be "started" till March, very early houses should be attended to in October.

Preston House, Linlithgow.

C. BLAIR.

THE EDITOR'S TABLE.

Darwin Tulips for the New Year.—One of the most interesting contributions to our table that we have received for a long time consisted of three full-blown plants of Darwin Tulip Wm. Copeland, the colour of which is a charming shade of lavender mauve. These were sent on January 3 by Messrs. de Graaff Brothers, Limited, of Leiden, Holland, and were perfect plants. The following particulars were also kindly sent by Messrs. de Graaff: "To-day we have sent three plants of Darwin Tulip Wm. Copeland. The bulbs were brought in a temperate house on December 1, where the temperature never exceeds 70° Fahr., and we picked the first flowers on December 27. We are certain this variety can be brought into flower in any ordinary greenhouse from January 1 to 15 quite easily and without any extra care or trouble. We thought this might interest you, as we do not believe there is another Darwin Tulip that can be had in perfect condition at such an early date."

GARDENING ACROSTICS.

DOUBLE ACROSTIC No. 7.

I grow among the loose *débris* of British mountains.

Firsts.—My botanical name written thus:
A. rosea.

Lasts.—A kitchen garden herb, which I resemble.

1. Sometimes a ball, sometimes wine.
2. A Roman writer of the first century on horticulture.
3. A mite that loves dryness and hates damp.
4. The generic name of an old-fashioned garden or greenhouse annual once very popular. Its flowers are like small Camellias.
5. "Non rego, nisi regar." On what might this motto be appropriately placed?
6. Connected with Price.
7. "An ignorant conceit," as Bacon called it, for plants growing "worse" when planted together.

Solutions of the foregoing must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C., not later than the first post on Saturday, January 24. Mark the envelope "Acrostic" in the top left-hand corner.

SOLUTION AND NOTES OF ACROSTIC No. 5.

FORSYTHIA—SIEBOLDII.

* 1.	F	UCH	S
† 2.	O	LEARIA HAASTII	I
‡ 3.	R	OWAN TRE	E
§ 4.	S	U	B
5.	Y	ELLOW NELUMB	O
¶ 6.	T	REFOI	L
** 7.	H	YBRI	D
†† 8.	I	RIS KÆMPFER	I
‡‡ 9.	A		I

* Leonhard Fuchs, born 1501, was one of the fathers of German botany. He published his herbal, "De Historia Stirpium," in 1542. The illustrations in outline are beautifully executed.—See Arber's Herbs. † Olearia Haastii is an evergreen with small, Daisy-like flowers opening in autumn. It is hardy in most places in the open.—Nicholson's Dictionary of Gardening. ‡ One derivation of the Rowan-tree (*Pyrus Aucuparia* or Mountain Ash) is from the Scandinavian "Runa"—a charm.

"Roan-tree and red thread

Haud the witches a' in dread."

—Friend's "Flowers and Flower Lore."

§ "Sub," as a botanical prefix to words, signifies "nearly," "slightly" or "somewhat," e.g., subrotund means roundish. || The yellow-flowered Nelumbo is a sacred flower in China.—Friend's "Flowers and Flower Lore," page 459. ¶ The Trefoil or Shamrock, which in very remote times was considered to be a charm against witches. It was plucked by St. Patrick as a means of illustrating the doctrine of the Trinity. It is now the national emblem or symbol of Ireland. ** A hybrid is a cross between two distinct species of the same genus. It is very often wrongly used to denote a cross between two varieties of the same species. †† Gauntlets, in their large catalogue No. 93, designate Iris Kämpferi "The King of Irises." ‡‡ The letters A I are supposed to be visible on the petals of the Hyacinthus or Eastern Hyacinth, but to be wanting on our Wood

Hyacinth, *Hyacinthus non-scriptus*. — Friend's "Flowers and Flower Lore," pages 384-85.

RESULT OF ACROSTIC No. 5.

Eleven marks were possible in this acrostic, one for each correct "first" and "last," and one for each correct light. The following marks have been awarded:

Eleven marks.—"Hero."

Ten marks.—"Rusticus," "Westbank," "Jan," "Bow," "Ping" and "Rustic."

Nine marks.—"Nautilus," Ernest Ballard, M. Browne, "Penwarne," "White Lady" and "Elm."

Eight marks.—"Miller," "Tempus Fugit," "M. M.," "St. Kevin's," "Boatsvale," R. Chapman and "Scotia."

Seven marks.—"Brixtonian," G. D. King, "W. R. D.," "Johnny Crow," "Judith" and "W. J. W."

Six marks.—"Shamrock" and A. Henderson.

Four marks.—N. G. Hadden.

Three marks.—Wm. Slocombe.

Two marks.—A. D. Morris.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET WILLIAM RUST (S. W. H.).—Puccinia dianthi, the Sweet William rust, is attacking your plants. You are quite right in taking and burning the diseased ones, and it would be well to spray the others with a rose red solution of potassium permanganate as a means of checking the spread of the disease.

VIOLETS FOR MARKET (E. G. W.).—The best selling Violets are de Parme, La France, Princess of Wales and wellsiana, the first named having double flowers. La France and Princess of Wales are large-flowered, long-stemmed varieties, wellsiana being smaller, shorter-stemmed and more free. The correct method of increase is by unflowered cuttings, making a beginning in early autumn with the runners, usually plentiful at framing-time. By inserting these in sandy soil in shallow boxes, excellent plants for putting out in April would result. Any runner growths produced during the winter would also be serviceable as cuttings. Divided plants from stock plants that have flowered for months are valueless by comparison, though they are useful occasionally for producing cuttings when they have fully recovered.

LILIUM AURATUM (L.).—Your success with this somewhat fastidious plant is most encouraging, and instances of it becoming permanently established are by no means common. In these circumstances it is desirable to do the best possible for it, and as you have to move it, we suggest the work be performed now. You had better replant it outside, giving it conditions as nearly identical as possible to those in which it has been so great a success. The bulbs will now have many basal or main roots, i.e., those below the bulb, and these, being of vital importance, should be preserved intact, and in the replanting spread out thinly—not doubled up in a mass below the bulbs. The stem roots, those on the old flowering stem, having completed their life's work and being, like the flower-stem, of annual duration only, can be removed close to the bulbs, in which position a richer supply of food will be of assistance to the new roots formed in the present year. We think it right to warn you that this replanting of established clumps may mean a loss of stature—possibly also of flower-buds to some extent—in the first year, though the check, if the work be intelligently done, should not be half so great as if

performed in spring, when growth will be more forward. Potting them up would most likely mean failure, and is not to be advised.

PAVING STONES (R. G., Woking).—So far as we are aware, there is no artificial paving that comes cheaper than natural stone. The cost of a broken or "rustic" paving at your station would probably be about 26s. per ton, carriage paid. One ton would lay down about ten superficial yards. For paths in the kitchen garden or in out-of-the-way portions of the grounds, we have seen paths made of concrete, 1½ inches to 2 inches thick of coarse concrete covered with three-quarters of an inch to 1 inch of fine concrete. The surface is ruled with the same joints one would get with rectangular paving. The ruling is done with the point of a trowel and straight-edge. Brick paths are less expensive than paving, and if the joints are of earth, and fine grass allowed to grow, are really picturesque, especially when in conjunction with brick buildings. Grey granite chippings make an excellent path, providing a good foundation is made before they are put down. They can be kept rolled or raked, according to taste, and the cool grey is a desirable colour in the garden.

PLANTS FOR CLAY SOILS (E. P.).—The most effectual, and possibly also the cheapest way of improving such soils is winter trenching—throwing the soil high into rough ridges—and incorporating lime in considerable quantities at a depth of 18 inches as the work proceeds. The ridging exposes a greater superficial area to the action of fresh air and tends to drain the soil, while the lime, by coagulating the particles of the soil, precipitates the water to a lower level, thereby warming, aerating and draining it as by a single action. Unless you are prepared to improve the soil in some such way as this, we are afraid you will have to be content with a modified success. You would also find spring planting of assistance in the case of the doubtful ones. The best herbaceous perennials for heavy soils are Pæonies, Flag Irises, Michaelmas Daisies, Kniphofias, Trollius, Spiræa, Heleniums, Helianthus (Sunflower), Astilbe Davidii, Anchusa, Phlox (herbaceous kinds), tall-growing Achilleas, Campanulas, such as van Houtte, all the persicifolia varieties, latifolia, lactiflora and carpatia in variety; Aster Amellus, Delphiniums, Lupinus polyphyllus, L. albus, Galegas, Japanese Anemones in variety, Oriental Poppies, Hemerocallis or Day Lily, Double White Rocket (Hesperis matronalis flore pleno), Hollyhocks, Cimicifuga, Sedum spectabile (in opposition to the general belief), Potentillas, Lychnis chalcedonica, Solomon's Seal, Megasea cordifolia purpurea, Lenten Roses, Pinks and Aubrietias. Such Lilies as Liliun umbellatum, pyrenaicum, croceum, Martagon and chalcedonicum are usually a success. Pentstemons would do if planted annually in spring, and, while affording good colour, assist by their comparative dwarfness.

TREES AND SHRUBS.

TO GET RID OF ELDER TREES (Junius).—Give the roots of the trees a good soaking with weed-killer or double the usual strength. This will kill them.

EUGENIA BERRIES (S. S.).—The fruits of Eugenia Ugni are used for culinary purposes in their native country. The plant is referred to as follows in the "Treasury of Botany": "Its fruit is highly esteemed in Chile. Those grown in this country are glossy black when ripe, and have an agreeable flavour and perfume." Their best use in this country would probably be for making into jelly.

EVERGREEN SHRUBS FOR HEDGE (New Reader).—The common Holly is the best evergreen you can procure for the position mentioned. Another suitable shrub is Berberis stenophylla. This is a free-flowering evergreen, but it is inclined to grow rather wildly and requires more attention to keep it in good condition than the Holly. If you select Holly, you had better not plant the hedge before April.

TO PRUNE WEIGELAS (Burton).—The young Weigelas ought to have been pruned rather severely during the first two years of their life. Much pruning would have prevented them from becoming straggly. As it is, you had better wait until after they have flowered in May, and then cut them fairly hard back. If you do not mind losing the flowers, the pruning may be done in February or March. This would give a longer growing season.

WISTARIA CHINENSIS AND ITS SYNONYMS (C. S. J.).—The plant to which you direct attention is named, correctly, Wistaria chinensis, but, as is the case with many other plants, different botanists have at various times placed it in other genera, and it has at one time or another been known both as Glycine sinensis and Milletia chinensis, names which are still occasionally used. As mentioned above, the correct name is Wistaria chinensis, and as such it is generally known.

FLOWERING EVERGREENS FOR SMALL GARDENS (Lion).—The following shrubs are likely to suit your purpose: Laurustinus (Viburnum Tinus), white, winter and early spring; Berberis Darwinii, orange, April; B. stenophylla, orange, April; Choisya ternata, white, May; Escallonia langleyensis, pink, June to August, sub-evergreen; Cotoneaster microphylla, white, May; Rhododendrons in variety, Ericas in variety and Pernettya mucronata. If the soil does not contain much lime, Hypericum calycinum, yellow, summer; and Berberis Aquifolium, yellow, March.

CORONILLA (Miss E. A. M. D.).—We are not sure to what plant you refer by Coronilla Genista. In any case the plant should not be pruned now to any extent. Should the wall space permit, the better way would be to train the plant out fan shape against the wall, and thin out at

their bases those branches which cannot conveniently be laid in. Were you to adopt a general pruning now, the plant may be deterred from flowering till well into the summer of next year, even supposing the pruning did not militate against it passing the winter in safety. If you could send us a flowering spray or two, we might be able to name it for you and, with a fuller knowledge of the plant, assist you in more definite form.

FLOWERING AND FOLIAGE SHRUBS (T. H. H.).—The following are twelve of the most useful flowering shrubs: Ribes sanguineum atropurpureum, Forsythia suspensa, Spiræa arguta, Berberis stenophylla, Syringa persica, Diervilla Abel Carrière, Philadelphus Lemoinei erectus, P. coronarius, Cydonia Maulei superba, Viburnum tomentosum plicatum, Cytisus præcox and Escallonia langleyensis. Good coloured foliage shrubs are found in Cornus alba Spæthii, C. a. variegata, Sambucus racemosa plumosa aurea, Corylus maxima atropurpurea, Japanese Maples in variety, Acer Negundo variegata, A. N. californica aurea, Euonymus japonicus, golden and silver varieties; Hollies Golden Queen and Silver Queen, Prunus cerasifera atropurpurea, and gold and silver variegated Tree Ivies.

SHRUBS FOR A NEW GARDEN (Westmorland).—The following shrubs are likely to prove satisfactory if planted in your north border: Berberis stenophylla, evergreen, 5 feet to 8 feet, flowers yellow, April; Ribes sanguineum, 4 feet to 5 feet, red, April; Berberis Aquifolium, 2 feet to 3 feet, evergreen, yellow, March; Forsythia intermedia spectabilis, 4 feet, yellow, April; Cornus alba Spæthii, golden-variegated foliage, 4 feet; C. a. variegata, 4 feet, silver-variegated foliage; Tree Ivies in variety; and Hollies in variety. For the south border the following selection is suitable: Spiræa arguta, 4 feet to 5 feet, white, April; S. japonica Anthony Waterer, 2 feet, red, July and August; Diervilla Abel Carrière, 5 feet to 6 feet, rose, May; D. Eva Rathke, 3 feet to 4 feet, carmine, June and July; Cytisus præcox, 4 feet to 5 feet, cream, May; C. scoparius variety andreas, 4 feet to 5 feet, yellow and brown, May; Forsythia suspensa, 4 feet to 10 feet, yellow, April; Daphne Mezereum, 2 feet to 3 feet, red, February; Berberis Darwinii, 4 feet to 8 feet, evergreen, orange, April; Liliacs in variety; Philadelphus Lemoinei erectus, 3 feet, white, June; Viburnum lantana and V. tomentosum plicatum, white, 4 feet to 5 feet, June; also any of the subjects recommended for the other border. The following Roses will be likely to thrive with you: Hybrid Perpetuals—Ben Cant, Captain Hayward, Charles Lefebvre, Dupuy Jamain, Frau Karl Druschki, General Jacqueminot, Hugh Dickson, Mrs. John Laing, Sénateur Vaisse, Margaret Dickson and Ulrich Brunner. Hybrid Teas—Arthur R. Goodwin, Captain Christy, Caroline Testout, General Macarthur, His Majesty, J. B. Clark, John Ruskin, Kaiserin Augusta Victoria, La France, La Tosca, Lady Battersea, Liberty, Mme. A. Chateau, Mme. Jenny Gillemot, Mme. Pernet-Ducher, Mme. Ravary, Marquise Litta, Mrs. P. H. Coats, Queen of Spain, Richmond and White Killarney.

FRUIT GARDEN.

PEARS DOYENNE DU COMICE AND CALABASH, TO PLANT ALTERNATELY (Junius).—That will do very well. Doyenné du Comice is not the freest of setters, but it is self-fertilising, all the same. It will help it to set better if, when in bloom, you will inoculate its stigma (centre column of flower) with the pollen of some other sort in bloom at the same time.

STONES SPLITTING IN PEACHES (Sittingbourne).—Some varieties of Peaches and Nectarines, also Apricots, have split stones more than others. The varieties Peach Early Rivers and Nectarine Victoria are very liable to have split stones. Splitting of stones is always more prevalent when the roots of the trees are growing in a cold soil and when the soil is lacking in lime. The position should be a warm one, no check must be given to growth, and during the period when the stones are "hardening" in the fruits the soil must not be allowed to get very dry. If it does, and then gets saturated suddenly through heavy rains or watering by means of a watering-can, stone-splitting is worse than usual.

THE GREENHOUSE.

GLOXINIAS IN THE GREENHOUSE (Scotia).—These can be readily grown in a structure maintained at the temperature named; but in order to raise them from seed more heat is required. If you desire to grow Gloxinias, the better way will be to obtain one year old tubers; that is to say, the produce of seed sown early in 1913. During the dormant season these can be purchased at a comparatively cheap rate from dealers, and in this stage they can be sent by post at little cost. Good tubers should be about the size of a halfpenny to a penny. These should be potted, towards the end of February or early in March, in pots 3½ inches in diameter. A suitable compost may be made up of two parts loam to one of leaf-mould, with a sprinkling of sand. In potting, the tubers should be placed just below the surface of the soil, and watered lightly till the new growths make their appearance, when the soil must be kept moist. Keep in the warmest part of the greenhouse, and thus encourage growth. When the pots are well furnished with roots, the plants must be shifted into larger ones, 5 inches in diameter being a good size. The same compost may be used as in the first potting. During summer the plants will need to be shaded from the sunshine. As the plants develop, an occasional stimulant in the shape of liquid manure, or one of the many concentrated plant foods now available, will be beneficial.

THE GARDEN.

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JANUARY 24, 1914.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Perpetual-Flowering Carnations.—The special society that exists for the promotion of the cultivation of these charming flowers, and known as the Perpetual Flowering Carnation Society, is a very live one. Its latest move is to offer affiliation to provincial horticultural societies, with a view to inducing them to include classes for this race of Carnations. This is a step in the right direction, and we wish it every success. The secretary, to whom all enquiries should be sent, is Mr. T. A. Weston, Floradale, Orpington, Kent.

The Forthcoming Chelsea Show.—We are pleased to learn that the spring show of the Royal Horticultural Society, to be held at the Royal Hospital Gardens, Chelsea, on May 19, 20 and 21, promises to be even better than the one held there last year. Two additional marquees, 300 feet long, are to be erected, and we hope that this means wider gangways, so that visitors can see the flowers with a greater degree of comfort. There were one or two other serious defects that ought also to receive the timely attention of the Council. In addition to these, the catering, suitable position for the band and facilities for Press photographers are items that someone with business acumen should be appointed to deal with.

Protecting Orchids at the Royal Horticultural Society's Hall.—All will agree that it is necessary to take every precaution against injury or theft, either of pollen or plants, of the valuable Orchids that are brought to the fortnightly meetings of the Royal Horticultural Society. We should have thought that the plants in question would have been sufficiently protected had someone been specially commissioned to guard them. To the great astonishment and disappointment of visitors, at the last meeting the special Orchids which had been judged for awards were placed behind an unsightly wire caging. It is to be hoped that the society will find a less offensive way of taking every reasonable care of choice Orchids, however rare and valuable they may be.

Natural Rock Gardens.—As a counter-scheme to the proposed "winter garden" at Edinburgh, a proposal has been put forward to convert the rocky pile that forms the foundation of Edinburgh Castle into a natural rock garden. Writing in *Country Life* last week, Miss Jekyll rightly points out that if this were done with proper regard to their wild and rugged character, beautiful effects could be obtained not only at Edinburgh, but at many other places where natural rocks exist. The sowing of seeds of such plants as Wallflowers, Red Valerian, the Harebell (*Campanula rotundifolia*), Pinks, Thrift and similar plants would be inexpensive, and the flowers would in no way detract from the natural effect of the rocks.

The Dutchman's Pipe (*Aristolochia Siphon*). In Southern Counties this makes an excellent

climber, either for the sunny side of a house or for clothing evergreen and other trees. Its popular name is taken from the resemblance of the flowers to the shape of the Dutchman's pipe. This plant is a native of North America, and so rapid is it in growth that it will readily ascend to a height of 25 feet or 30 feet.

The Japanese Roof Iris.—Writing from Japan in 1899, the late Mr. Peter Barr referred to *Iris tectorum* as growing freely on the thatched roofs of cottages in the country villages, and at the end of April and May producing masses of beautiful blue flowers, rising from rich green foliage. We should be glad to hear from readers if any attempts, successful or otherwise, have been made to grow this Iris under similar conditions in this country.

Violets in Pits or Frames.—These should be freely ventilated throughout the winter unless the weather is frosty. The plants may be grown in pits, from which the lights are removed whenever the weather is favourable. Water two or three times during the winter, when sufficient should be given to reach the extremities of the roots. Damping among Violets is the result of bad ventilation more frequently than from any other cause. Remove decaying foliage and stir the soil among the plants whenever it becomes necessary.

Sweet Corn as a Vegetable.—Those who wish to grow some of the better forms of Maize or Sweet Corn for the dining-table ought to sow the seeds during the next week or two, as it is essential to have strong plants for the open garden by the end of May. If sown singly in 3-inch pots in a warm house or frame, germination will not be very slow, and the seedlings should be potted on into larger pots as often as necessary, so that by the time all danger of frost is over, they will be sturdy plants nearly two feet in height and probably in pots 6 inches in diameter. Soil composed of loam two parts, decayed manure one part, and some coarse sand added to the whole answers well for potting. Several varieties suitable for this country are offered by the leading seedsmen.

A Beautiful Mezereon.—*Daphne Mezereum grandiflora* is one of a dozen or so shrubs which bloom during the darkest days of the year, and for that reason alone it is of considerable value. But its beauty is such that it would be awarded a conspicuous place in the garden even if it flowered during April and May, when the majority of flowering shrubs are at their best. It is a somewhat more vigorous plant than the common Mezereon, and its flowers are rather larger and deeper-coloured than those of the type. Unfortunately, it is not easily produced from seeds, and must be grafted upon roots of young plants of *D. Mezereum*. For this reason it is scarce and rather difficult to procure. It is sometimes called *autumnalis*, on account of some of the flowers opening during late autumn; but as a rule it is during late December and January that its flowers are seen to the greatest advantage.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The History of White Heather.—I should be greatly obliged if any reader could give me information as to when and how white Heather came to be regarded as the symbol of good fortune and luck. Is there any reference to it in this respect in any well-known book? Thanking you in anticipation,—R. O.

Primula pulverulenta Mrs. R. V. Berkeley.—Your contributor on page 22 of January 10 issue writes with regard to Primula Mrs. Berkeley that its flowers are of a soft rosy orange shade, with a deeply coloured eye. Apart from this, he says it comes true from seed. This is very interesting. When Messrs. Veitch and Sons of Chelsea first introduced the variety Mrs. R. V. Berkeley into commerce, I bought some plants. The firm came into possession of this Primula in rather an interesting manner. Among some

good deal of labour and oftentimes disappointment, as they are very subject to damping. Now that they may be relied upon to come true from seed, their popularity is increasing rapidly. The intermediate class is certainly the most useful for ordinary bedding purposes, although the tall varieties may be made use of in many ways. The dwarf or Tom Thumb section is not durable enough to be made use of in important schemes of bedding. A long, narrow border which was planted here last year contained both tall and intermediate sections, with their heights and colours judiciously mixed together. This proved to be most showy and effective, and called for general admiration all through the summer and autumn. It is often said that the Snapdragon will grow in any kind of soil, be it ever so poor; but I must warn those who wish to have a durable display of flowers till the end of the season that the plants must be grown well from beginning to end. For flowering this season the seed must be sown at once under glass. The varieties which find most

to cuttings removed from weakened plants. Heat and light for Perpetual-flowering Carnations must go hand-in-hand. If you have a light, airy greenhouse, you can have more heat than if you have an old-fashioned one with heavy rafters or one shaded in any way. The ideal Carnation house is one running from east to west and facing south, with an abundance of ventilation. Our Carnation houses cover a quarter of an acre each. In such a house the light and buoyancy of the atmosphere can be imagined, yet 50° at night is the average temperature. In a less favourably situated house 45° at night would be adequate to promote strong, natural growth. Many amateurs obtain really wonderful results from Carnations grown in cold greenhouses. The reason for this undoubtedly is that it is better to err on the cold rather than on the hot side in growing Perpetual-flowering Carnations.—MONTAGU C. ALLWOOD, *Hayward's Heath*.

A Beautiful Hardy Heath.—*Erica lusitanica* (codonodes) is now fully in flower in the open, and it is surprising to find how little one sees of it or how few garden-lovers even know there is such a glorious winter-flowering hardy plant. Having been cordially invited by Mr. Cox, the genial gardener to Lord Eustace Cecil, to view the grounds at Lytchett Heath, on a cold day (December 29) I embraced the opportunity of calling when staying in the district, and I can only say that a greater winter treat in the garden was never before presented to me. The great aim in this fine establishment is to allow Nature to perfect herself in the arrangement of all kinds of subjects; but it is to *Erica lusitanica* I should particularly like to draw your attention. The soil is of a good brown loam, somewhat on the sandy side, but not the poor, shallow moor ground that one would expect to find on the hillside, where common moor soil seems everywhere else but here. The plants, perhaps, cover altogether two and a-half to three acres, though spread about they really look to cover more. About thirty-five years ago a dozen or so plants were put in and allowed



ERICA LUSITANICA, NOW IN FLOWER IN THE HEATH GARDEN AT KEW.

seedlings raised from seed, sent from China by their collector, this white variety of pulverulenta first made its appearance. It had a cream white flower, with rich orange eye and mealy stem. The ones sent me corresponded in all details to their description. I seem to remember that some of the later flowers, when fully matured, showed a faint orange pink tinge. Further, my plants, so far, have failed to form seed, and on enquiry I find that those of Messrs. Veitch have behaved in the same way. Now, I should like to know if the variety Mrs. Berkeley spoken of by your contributor is the Mrs. R. V. Berkeley of Messrs. Veitch and Sons, and, if not, where his stock originated and where seeds can be obtained.—JOHN MACWATT, *Morelands, Duns*.

Antirrhinums as Bedding Plants.—It is doubtful if there is another race of plants more useful for bedding purposes than the Antirrhinum. A year or two back it was necessary to propagate the stock from cuttings in the autumn to ensure the plants coming true. This, of course, meant a

favour are Delicate Pink, Coral Red, Deep Crimson, Apricot, Orange King, Fire King, Carmine Pink, Yellow, and White.—E. HARRISS, *Lockinge Gardens, Wantage*.

Heat and Light for Perpetual-Flowering Carnations.—If I were asked what were the two greatest enemies of the Perpetual-flowering Carnation, I should certainly say improper manuring and excess of artificial heat. Few gardeners realise that it is impossible to cheat Nature. At least, if you do cheat her by forcing your plants one season, she retaliates the next. Hence if you give Perpetual-flowering Carnations an excess of artificial heat during the winter months, you force their growth and thus weaken it; and when once a Perpetual-flowering Carnation has been weakened through improper cultivation it is practically spoilt. Being perpetually growing, it has no dormant or resting period, like other plants, to recuperate its strength and become strong. This must be obvious to every thoughtful cultivator, and all too many failures can be traced

to do as they liked. As year by year went on, the annual seeding of the plant brought progeny after progeny, till there is now a perfect plantation of it. Nothing can withstand the onward march of this plant; Brambles, Gorse, and common Heather all have to give way to the advance of this Tree Heath, which appropriates the entire surface of the ground as time goes on. Plants are in flower in all sizes from 9 inches high to 14 feet, but the bulk of this forest of Tree Heath range in height from 7 feet to 10 feet. Standing up on the outside terrace walk and looking down at it from various standpoints, it looked like a whole hillside of deep green feathery Tamarisk, each top thickly terminating in a pyramidal spike of white Heather flowers, sometimes faintly tinted with pink, but with scarcely any variation. The soil has never been broken up, and between the plants, before they get matted together, the surface is covered with short moss and weakly grass. I am told by the head-gardener that it is rabbit-proof.—MAURICE PRICHARD, *Christchurch, Hants*.

The Christmas Bush.—Replying to an enquiry in your issue of the 3rd inst., you express your inability to recognise the Christmas Bush. This is *Metrosideros tomentosa*, or Ironwood Tree, or Downy Rata. Its Maori name is Pohutukawa, and in New Zealand it is often known as the Christmas Tree.—A. L. FORD.

Mistletoe Growing on Pear Trees.—*Re* the interesting article on "Some Peculiarities of Mistletoe" by "C. Q." in THE GARDEN for December 27, 1913, it looks as though your correspondent has inadvertently overstepped the mark of strict veracity by the emphatic statement that Mistletoe is never found growing on the Pear tree. If it is a fact that the occurrence has not yet been recorded, it may be an item of some interest to the numerous readers of THE GARDEN if you will kindly permit me to state that there is a Pear tree, some 40 feet high, growing in the gardens here which carries at the present time four healthy specimens of the parasite. They are dispersed at various heights in the tree on different branches. The largest plant is about two feet in diameter, and all are looking normally healthy. So also are all the parts of the host tree on which they are growing. The Pear tree is the variety Thompson's, and the parasitic plants are all naturally sown. Other instances of trees that I think are of rare occurrence as playing the successful part of host to this parasite are the Medlar and the Persian Plum. Both of these trees I have seen with large and healthy specimens of Mistletoe established thereon.—W. J. RENDALL, *Fern Lodge Gardens, Malvern Link.*

January Roses.—As instancing the abnormal season, I cut on January 11, from the open ground, sufficient Roses of the following varieties to make up two large vases for the table, mostly of very good colour and quality: Corallina, Lady Hillingdon, Safrano, Climbing Papa Gontier, Billiard et Barré, General Gallieni, Nita Weldon, Mme. Bruant, Mrs. A. Coxhead, Irish Elegance, General Macarthur, Grüss an Teplitz, Noella Nabonnand, Mme. A. Chatenay, Mme. A. Carrière, Comtesse du Cayla, Leonie Lamesch, Leontine Gervaise and Green Mantle. It will be noticed that most of these are either pure Teas or carry Tea blood, but the Chinas, Polyanthas and wichuraianas are represented, and even the Penzance Briars. Grown on high ground exposed to all weathers, these Roses lay under an inch of snow on December 28, and on New Year's Day there was skating in the neighbourhood. Until Christmas, Frau Karl Druschki, Caroline Testout and several other exhibition Hybrid Perpetual and Hybrid Tea plants gave blooms quite up to National Rose Society's Autumn Show form, but they are now proceeding comfortably with their belated winter sleep, whereas many of the Teas remain quite active. It is to be feared the result of such dissipation will show itself later. Since May 15, when Rosa sinica Anemone opened the ball, my table has not been without a vase of Roses cut from the open ground. What other flower can show such a record?—F. A. G., *Worcester.*

FORTHCOMING EVENTS.

January 27.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1—6. Lecture at 3 by Professor W. Somerville on "Some Aspects of American Forestry."

January 29.—Manchester and North of England Orchid Society's Meeting.

January 30.—Beckenham Horticultural Society's Meeting.

THE TREATMENT OF FROZEN PLANTS.

IN the extremely variable climate that is characteristic of the British Isles during the winter months it is not surprising to find that many amateurs, and some professional gardeners, suffer severe losses by frost. It is one of the curious and none the less vexatious ironies of gardening that the heating apparatus of greenhouses or frames, if it ever does fail at all, will do so just when the country is in the grip of frost, and the gardener under those circumstances finds, when he pays his morning visit, that many, if not all, of the contents of the houses and frames are frozen. In some instances he is, perhaps, to blame; but even in the best regulated gardens accidents of this kind will occur, and it is as well to know the best course to adopt under these or similar circumstances. Believing as we do that prevention is better than cure, it is advisable to remember that plants which are in a comparatively dry state suffer far less from frost than those of a similar kind whose tissues are turgid with moisture; hence the wise gardener will see to it that they have the lowest possible quantity of water during frosty weather, without, of course, allowing them to suffer in that direction. The reason is this: As every student of plant physiology is aware, a plant is made up of innumerable thin-walled cells, and that these are more or less filled with moisture. When this becomes frozen, it, under a natural law, expands and the delicate walls of the plant cells are ruptured. It is thus obvious that the more highly charged these cells are with moisture, the greater will be the damage to the cell walls; hence the advice to be sparing with water during frost.

But Nature, in her wisdom, has to some extent provided against damage by this rupture of the cell walls, and it is quite possible for the tissues to right themselves, providing the conditions for doing so are favourable; hence the gardener who is conversant with these conditions is well on the way to saving, it may be, a valuable lot of plants, some of which it might be exceedingly difficult, if not impossible, to replace. Briefly, the conditions favourable for recovery are very slow thawing. It is sudden thawing, brought about, it may be, by a burst of sunshine or correction of the heating apparatus, that is so disastrous to frozen plants. Knowing the cause of damage and the conditions best suited for minimising it, the cultivator will not be slow to bring about such conditions. First of all, the houses or frames should be shaded if there is danger of sunshine; then the whole of the frozen plants and woodwork be syringed with water that is as near freezing point as possible, keeping this up until satisfied that frost has departed. This will be an exceedingly cold and unpleasant task, but one that may mean the difference between saving and losing most of the plants. It will be necessary to keep them as cool as possible, without letting frost actually reach them, for a few days afterwards. This treatment applies to all forms of plant-life, whether hard-wooded, like the Rhododendrons and Camellias, or soft-wooded, like the Chrysanthemums or Primulas. The chief points to observe are to keep the water supply at the roots as low as possible, and, in the case of the plants being frozen to shade them for some hours, and to syringe them overhead with icy cold water. H.

DAFFODIL NOTES.

The Royal Horticultural Society's Daffodil Year Book.—I think it will be good, if to some rather old, news to learn that the 1913 edition has been sold out a good many weeks since, and that its reception has been such by Daffodil people that the President and Council have already determined upon a second one this year. They have honoured me by again appointing me editor or collector, and I have begun my work by trying to secure much more information about Australian and New Zealand doings than I was able to incorporate in No. 1. I believe the Daffodil to be a world's flower, and that there is a long future before it. For instance, I have recently learnt that they can grow their own bulbs in Sweden; and although I have heard two contradictory accounts of how they do for early pot work from a Swedish friend, I have had a present of some which I am growing in my own garden at Whitewell. To go back to the Year Book. It has occurred to me that it would be very interesting to have a chapter of *short notes* from as many observers as possible of anything that specially strikes them about the flowers or shows, or other matters connected with the Daffodil. Would anyone, *when* he has anything to record or say, *at once* jot it down and send it to Whitewell Rectory, Whitchurch, Salop, "lest he forgets."

Early Flowers.—In this abnormal season I expect many people will have instances of abnormal times of blooming to record. My abnormalities have been a seedling of *Narcissus Bulbocodium citrinum* in full flower in November, and a seedling Poetaz (*Chaucer* × *Soleil d'Or*) out on January 6. I have a nice little batch of this cross, and it will be interesting to see if the majority inherit the early flowering propensities of their parents.

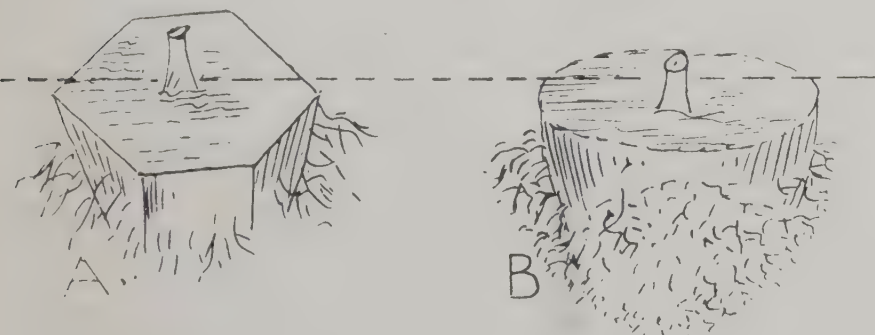
Royal Horticultural Society's Awards to Daffodils.—Readers may remember that the new scheme of awards was published some time back in THE GARDEN. I have heard from several prominent members of the *Narcissus* committee, and they all express their approval and say that it is just what is wanted. The Midland Daffodil Society formally adopted it at its special general meeting last December. I take this opportunity of urging all societies, both at home and abroad, to "go and do likewise." If anything should tend to popularise the Daffodil, this scheme should, if enough use is made of it by Daffodil people generally and if the *Narcissus* committee administers it in a broad-minded and thoughtful way. The modern *Narcissus* is a ubiquitous race in the aggregate, but not so all its individual members. They develop preferences early in life. Like a wise parent who wishes his children to adopt the several callings which are most suitable for them, and who gives each the best training and "send off" he can with this object in view, the Royal Horticultural Society in these awards gives each variety its chance by pointing out the special purpose or purposes for which it is most fitted. There are a large number of splendid garden plants which should now have this distinction appended to them. I sincerely hope all these will be brought before the committee, and that each one will receive its due. I believe the Daffodil-buying public want to have a list of good, reliable garden plants, and not just the names of one or two of superexcellence. For these the first-class certificate might, and would, be reserved. I hope readers will favour me with their views. JOSEPH JACON.

THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

(Continued from page 36.)

Hardy versus Bedding Plants.—Long was the opinion cherished that hardy flower gardening as compared with the exclusive use of "bedding" plants was to lessen labour, worry and expense to a considerable extent, and there are probably some who to this day are not yet satisfied that such is not the case. Were the custom of planting borders and beds thinly with a collection of hardy plants, and leaving them for years practically to themselves, to be substituted for tender bedding plants, that might be true; but to secure an equally brilliant display of bloom, with the plants and their environment kept equally well, the hardy flower man has nothing in his favour in the above respects. If we take the round of the year and jot down the essentials that cannot be omitted without to some extent depreciating the beauty of floral schemes, and thereby lessening interest in the garden and losing the fruits of much thought and labour, it will be obvious that hardy flower gardening is no mere work that can be taken up at odd minutes, or left altogether should no odd minutes occur in the gardener's experience.



A—Plant prepared by root pruning for transplantation. B—Ball of same plant when lifted. Dotted line shows depth to replant.

Beginning in October or November, the final clearance of worked-out material must be undertaken, whether or no rearrangement or replanting is to be done. Anyhow, as previously noted, sections of the border must be recultivated and replanted, and the rest of it manured and dug, or, if digging is repugnant, then surface-dressed in a thorough manner. The less hardy material, *e.g.*, *Lobelias* of the cardinalis section and *Montbretias*, as a rule, must be safely stored till spring, when, as soon as the surface soil is dry enough, clods must be broken and a smooth surface produced. The planting of blanks left for the purpose of being filled with *Sweet Williams*, *Hollyhocks*, *Lychnis coronaria* varieties, *Carnations*, *Montbretias*, *Hyacinthus candicans* and *Tiger Lilies* must be proceeded with in detail. Early planting, as a rule, always gives the best results, and especially when the summer is dry and abnormally warm. Following these come *Gladioli* and, a little later, *Sweet Peas*; perennials raised under glass—*Delphiniums*, *Celsias*, *Lupinus polyphyllus* varieties and others, *Antirrhinums*, *Stocks* and *Larkspurs*, similarly produced, the time and labour incident to the production of these being also taken into account. Meanwhile, hoeing, if a hoe can be insinuated between the close-set plants, hand-weeding, removal of *Snowdrop* and *Winter Aconite* foliage as it decays, and, later, of that of other bulbous plants, must be attended to, and

quantities of *Chrysanthemums*, *Marigolds*, *Asters*, &c., for transplanting in August and September be put into a piece of reserve ground. Plants not usually found in herbaceous borders, such as *Francoa ramosa* and *Agapanthus umbellatus*, give character, and room for them may be found in prominent positions during the early summer.

Staking and Tying.—In May or early in June the question of supporting the plants comes up for consideration, and here much misspent time and labour occurs, a very large number of plants which need not be supported being usually held up by means of stakes, as well as others which, being strong enough to withstand unaided all kinds of weather, need no support whatever. Of the latter, mention may be made of *Senecio tanguticus*, *S. Clivorum*, *Liliums*, *Aconites*, *Chrysanthemum uliginosum*, *C. maximum* varieties (young plants), dwarf and medium tall *Phloxes*, many of the tall *Composites* and dwarf *Starworts*. There is another class which requires merely a band of string loosely arranged around the stems, and includes many of the *Starworts*, such as *Aster Linosyris*, *A. asteroides*, *A. Nancy*, *A. pulchellus pulcherrimus* and *A. Tradescanti*, the bands being removed when the plants are coming into flower in order that they spread out naturally. *Stenactis speciosa*, *Solidago* and *Eupatorium ageratoides* are others. Then, of those plants which must

have the support, of a stake or stakes, there is a section which needs, for the height of the plants, comparatively short ones; only, and this applies to all the means used for supporting plants, they must be staked at an early stage or before they have swayed in the least from the upright—*Larkspurs*, tall *Antirrhinums*, *Hollyhocks*, *Dahlias*, *Gladioli*, tall *Asters*, such as *John Wood*, the *Novæ-*

Angliæ section, *Climax*, very tall *Phloxes*, *Lupinus* and many more. The number of those requiring stakes almost their own height are very few, one of the best known being the *Carnation*, which is apt to be broken by tits unless protected in this way. There is a small section which may, when the plants are large, require more than one stake, examples of which are *Pyrethrums*, *Lupinus polyphyllus*, *Echinops Ritro*, *Galega officinalis alba*, *Geranium pratensis flore pleno*, *Pæonies* and *Achillea Millefolium rubra*. From three to six stakes for these are inserted at equal distances round the plants, and stout string attached to each keeps the plants from sagging, while at the same time the supports are not visible—an essential in good staking. There are other methods of supporting plants by means of short, stout *Spruce* branches (dead, of course), and an ingenious method, noted in a recent book, by means of wide-meshed wire-netting. For some things I occasionally stoop to pegging. To dwarfen *Dahlias* it is a capital expedient, and *Gypsophila paniculata*, an ugly thing when staked, if pegged down round the sides, is quite charming.

Another constant call for labour throughout the summer is that of keeping plants within due bounds. Neither in height nor laterally should any plant be allowed to transgress in these particulars. A plant or plants will often be found overtopping others behind them, and the

plan to pursue with these is to pinch or cut them back to a proper height. *Composites* of all kinds submit to this. Lateral growths should be carefully restricted without it being possible to see, unless searched for, that it has been done. The removal of decaying flowers and those which if left would produce seed is another item which claims unremitting attention. If plants which are properly attended to in this respect do not continue to produce flowers, as many do, most will at least retain their foliage fresh and green; but there will always be a few which must be cut down, and to fill the blanks, and all other blanks, one must fall back on the reserves planted in the early summer to meet surprises of this kind. I am aware that many gardeners have a dislike to undertake the filling of blanks, esteeming the extra labour uncalled for; but it takes merely a few hours now and again, and the time need not be taken while other more important work is waiting. The operations are very simple—merely to see that the holes for the plants are deep enough to let the ball be covered 1 inch or 2 inches deeper than it was previous to transportation, not to attempt to secure a larger mass of earth with the roots than will remain attached to them, to plant firmly, to stake if required at once, and to saturate with water very thoroughly the ball and the new surroundings, choosing dull weather or late in the afternoon for the work.

Watering.—The application of water in periods of drought and how best to manage it requires a few words. And it is to be remarked that it requires less water to moisten firm than loose soil, which also retains moisture longer. Pure water, again, is far less valuable than water strengthened with a fertiliser, the cheapest being superphosphate of lime, 1 oz. to every three or four gallons of liquid. Sulphate of ammonia may be substituted on occasion if growth hangs unduly, but I find the first named usually sufficient. Theoretically, we are told that manure-water should not be used on dry soil till it has been moistened with pure water. Practically, that is a mistake, and I never apply pure water to established plants under any conditions. Gardeners are averse to apply water even where the supply is unlimited; but in a season like the past it is impossible to have plants in satisfactory condition unless quite a number are watered at regular intervals. Close planting, though it would appear to be a means of exhausting the supply of moisture more rapidly, really conserves it. Even in the last season a large number of plants came through the drought without needing water. *Rudbeckias* are among the first to suffer. *Phloxes*, *Pentstemons*, *Gladioli* and *Stocks* are other common plants which are not drought-proof, and, of course, many, or most, others are all the better for regular applications during long periods of drought.

Prestonkirk, N.B.

R. P. BROTHERSTON.

(To be continued.)

SHRUBS IN FLOWER BORDERS.

WHERE ornamental shrubs are growing in the herbaceous or mixed border, it will be necessary to check their roots each winter otherwise they will rob the soil of much nourishment that ought to be available for the more legitimate occupants. The thrusting of a sharp spade well down into the soil all round the shrub, and nearly as far away from the main stem as the branches extend, is a rough but simple and effective method of attaining this end.

B. B.

WINTER - FLOWERING
SHRUBS.

THE WITCH HAZELS (HAMAMELIS).

THE Hamamelis are in the front rank of winter-flowering shrubs, the several representatives



THE NORTH AMERICAN WITCH HAZEL, HAMAMELIS VIRGINICA.
THIS USUALLY FLOWERS FROM OCTOBER TO DECEMBER.

of the genus blooming over a period of some six months, from October to March. Six species and one variety are in cultivation, all being deciduous shrubs or small trees. The Witch Hazels thrive best in a well-drained, rather light loam, in which it is worth while mixing some leaf-mould and peat. They are propagated from seeds, or by grafting, under glass in early spring, using the American Witch Hazel (*H. virginica*) as a stock. It is worth while taking a little pains to select good positions for the Hamamelis, for two reasons. In the first place, flowering in winter, severe frosts damage the open blossoms. Though the buds are uninjured and several degrees of frost do not appear to damage the open blooms, it is very desirable to plant the Witch Hazels in positions sheltered from the north and east, and even the south-east, to avoid the early morning sun reaching the flowers while they are frozen. A second desirable point is to have evergreens as a background, it may be a few yards away, to show up the flowers, the Hamamelis blooms appearing in advance of the leaves. A group of Witch Hazels in full flower in January or February, with the sun shining on them against a dark background of Yew or Holly, presents a charming

picture. Taken in the order in which they bloom, the first species to be briefly described is

H. virginica, the American Witch Hazel. The flowering season is from October to December, and although the individual flowers are not showy, during a fine late autumn and early winter large bushes laden with the starry brownish yellow blooms are very pretty and interesting. A native of the Eastern United States, *H. virginica* was the first species of Hamamelis introduced to British gardens, the year 1736 being given as the probable date.

H. mollis, the Chinese Witch Hazel, is the most beautiful and attractive member of the family. Flowering during December and January, words cannot adequately describe, or an illustration do justice to, a bush of this Witch Hazel. The narrow, rich yellow petals, about an inch long, are prettily curved at the tips. The flowers are deliciously, even powerfully fragrant. When we have larger bushes and more of them, the Chinese Witch Hazel will be in demand for cutting. Sprays last fully a fortnight in water when cut, the fragrance being very pleasing in a room. *H. mollis* is distinct from other species in summer, having much larger, broadly oval leaves, 6 inches long and

3 inches to 4 inches broad, and very hairy. It is readily propagated by grafting on stocks of *H. virginica*, young plants commencing to flower the second year after grafting when about 1 foot high. We are indebted to Charles Maries for this beautiful Witch Hazel, which he introduced from China when collecting on behalf of Messrs. J. Veitch and Sons from 1877 to 1879.

H. arborea.—A native of Japan, this species forms an upright-growing bush or small pyramid-shaped tree. The first flowers usually open during January. The narrow, golden yellow petals are curiously twisted, giving the flowers a starry appearance. It is free-flowering, and the sprays are useful for cutting. Introduced in 1862, the Japanese call the tree the

Mansak. With them it is a tree 20 feet or more in height.

H. japonica.—Another Japanese Witch Hazel, this species never attains anything approaching the height of the last named, being quite a bush up to 6 feet or rather more in height. The flowers are, if anything, a little paler than *H. arborea*, and as a rule they are rather later in opening. A variety of this species, *zuccariniana*, has very distinct and attractive citron yellow flowers. Next to *H. mollis* I should put it as the most showy and desirable to cultivate.

H. vernalis.—This species hails from America, and is a recent introduction to this country. It has been described as a spring-flowering *H. virginica*. Plants of this have flowered at Kew, but, as they are small, it is early yet to form an opinion of their value.

Another closely allied tree at present in flower is *Parrotia persica*, a native of Persia. Other members of the Natural Order Hamamelidaceæ grown in our gardens include several species of *Corylopsis*, *Fothergilla major* and the *Liquidambar*.
A. O.

SHRUBS FOR COLOUR
EFFECTS.

SOME shrubs are seen at their best when grown as isolated specimens in open positions; others can only be used with telling effect when planted together in groups. In the following notes I



THE NEW CHINESE WITCH HAZEL, HAMAMELIS MOLLIS,
WHICH FLOWERS IN JANUARY. NOTE THE SIZE OF THE
FLOWERS COMPARED WITH THOSE OF THE OTHER SPECIES.

intend to give six of the best shrubs for massing in large, bold beds. Foremost among such shrubs are the

Azaleas, or Swamp Honeysuckles, which produce an abundance of their fragrant blooms in warm tones of orange, pink, and red during May and in the early days of June. Although usually referred to as North American, the varieties of the Swamp Honeysuckle are mainly of hybrid origin, being derived from *A. nudiflora*, *A. viscosa* and other species. These shrubs require peaty soil and sheltered positions. The elements they resent most are lime and cold winds; but, given suitable conditions, there are no shrubs to excel them for colour schemes in beds or borders.

Viburnum plicatum, or Japanese Guelder Rose.—In the writer's opinion this is worthy of second place by virtue of the beautiful trusses of white flowers, so profusely borne as to almost hide the dark verdure of the leaves which form the background. It is one of the easiest shrubs to cultivate, for it is perfectly hardy and yields excellent results in a moderate soil. It is sometimes known as *Viburnum tomentosum plicatum*.

the surrounding landscape. It is as hardy as the Gorse, and will thrive in almost any soil.

Hydrangea paniculata grandiflora.—The list is concluded with one of the most delightful of all the late summer-flowering shrubs. This *Hydrangea* is noted for its massive plumes, often more than a foot in length, of pure white blooms. It needs a good soil and a heavy mulching in winter, and requires to be pruned hard at this season to keep the plants within bounds, for if left to grow unchecked it might easily attain a height of 20 feet or so.

C. Q.

JAPANESE LILIES FOR THE GREENHOUSE.

AS the finest bulbs of the different Lilies from Japan are now reaching this country, the present is a good time to take them in hand where they are required for potting up for the decoration of the greenhouse or conservatory. If delayed later, the bulbs are apt to deteriorate when removed from their coating of clay in which

markings thereof, as well as in the time of flowering and other particulars. Of the well-marked varieties that can be obtained true to name are *platyphyllum*, or *macranthum* as it is sometimes called. This has tall yet stout stems, clothed with very broad leaves, while the saucer-shaped blossoms are unusually large and of a thick, wax-like texture.

L. platyphyllum virginale is a counterpart of the preceding, except that the flowers have few, if any, spots, the only colouring being a yellow band down the centre of each petal. In *rubro-vittatum* the flowers are quite distinct from any other, the golden stripe down the centre of each segment being replaced by a bright crimson one. When first expanded this is most striking, but the crimson becomes somewhat dull a good while before the petals drop. This variety is less vigorous than either of the preceding, a remark which applies also to *Wittei* or *virginale*, an unspotted flower with a central band of yellow. The bulbs sent here from Japan of the two varieties *rubro-vittatum* and *Wittei* are smaller than those of the other forms; but, as far as my experience extends, they can be depended upon to flower well, and are less liable to die off in that unaccountable manner characteristic of *L. auratum* itself. An exceedingly valuable Lily for pot culture, as well as for the open ground, is

L. speciosum. The flowers have not the heavy perfume of *L. auratum*, while, when growing, the foliage is much less liable to be attacked by aphides than *L. longiflorum*. There is a considerable amount of variation in the different varieties of *L. speciosum* (*lancifolium*), the flowers ranging in colour from white to rich carmine or crimson. Of white varieties, the most generally met with is *Krätzeri*, of sturdy growth, with bright green leaves and stems. The flowers, which reflex very regularly, are of the purest white, with a greenish stripe down the centre of each petal. To the ground colour of the flower the dark chocolate anthers afford a direct contrast. In this variety the bulbs are of a distinct yellow tint. Much in the same way as the preceding, but with bright yellow anthers, is *album novum*, a very fine flower. It is a good deal

scarcer than *Krätzeri*. The coloured varieties that we receive from Japan differ considerably from each other, in some the flowers being of varying shades of rose, but usually of a deep tint. A well-established and popular variety is *Melpomene*, whose large blooms are of a rich carmine-crimson margined with white. The bulbs of this variety are very liable to break up into two or three or even more crowns, so that they are somewhat irregular in shape, and will push up several stems. The variety *Melpomene* varies somewhat in depth of colouring and other particulars. A superior form, known as *magnificum*, has come prominently forward within the last few years.

There are several other Japanese Lilies that may be grown in pots, but not many of them are so treated other than those named above. The magnificent bulbs of that variety of the Tiger Lily known as *Fortunei*, which we receive from Japan, grand though they are in the open border, do not



A LARGE LAWN BED PLANTED WITH ESCALLONIA PHILIPPIANA, A WHITE-FLOWERED HARDY SHRUB.

Viburnum Opulus sterile (Snowball Tree).—This is a variety of our native bush, the Guelder Rose. The variety sterile differs from the type, in that its white flower-heads are round and much larger. The individual flowers, although bright and showy, are in reality barren or sterile, and in consequence are devoid of berries. Like the foregoing, it is quite hardy and not in the least fastidious as to soil.

Escallonia philippiana.—It is hard to understand why this very graceful subject is not more often planted. It is one of the hardiest of all the species, and is certainly hardier than *E. macrantha*, which, as a rule, needs the protection of a wall. It produces small white flowers. It is neat, but extremely graceful, as may be judged from the illustration on this page.

Cytisus scoparius sulphureus, or the Moonlight Broom.—The sulphur yellow flowers of this Broom are produced in such profusion during May and June that they appear to illuminate

they are sent to this country, as exposed to air they soon shrivel.

Lilium longiflorum, which is so extensively used for pot culture, has been here for some time, as it ripens earlier than the others. Still, the later consignments contain very good bulbs, which can be thoroughly depended upon to yield perfectly satisfactory results. We get several forms of this Lily from Japan, chief among them being the large, bold-growing *giganteum*, which is so much appreciated by those who grow them for commercial purposes; *formosum*, a fine, early-flowering variety; *Takesima*, remarkable for its brown stems; and *Wilsonii*, a very large flower, while the habit of the plant is particularly sturdy. Next may be mentioned

L. auratum, a really magnificent Lily, variable in character and erratic in behaviour. Even among what may be regarded as the typical kind a wide range is to be found, as different individuals vary in stature, size of flower and the

do as well in pots as the variety splendens, which is grown by the Dutch.

Cultural Hints.—The Lilies enumerated here may be potted singly, while large masses or clumps may be made up by putting two or three or more together in a pot, or even in a tub. The soil should be of a fairly lasting nature, such as two-thirds loam to one-third peat, with a liberal sprinkling of sand. In potting, it is a good plan to place a little clean sand around the base of the bulb. After potting, a good place for them is a cold frame, where they are just protected from frost. Under these conditions they will root slowly but surely. Not much water will be required till the shoots make their appearance above the ground. It should be borne in mind that the foregoing are all stem-rooting Lilies; that is to say, they push out a quantity of roots from the base of the flower-stem. On this account space should, when potting, be left for a top-dressing of good soil when these roots make their appearance. These remarks apply to bulbs newly imported from Japan, and not to retarded ones, which need different treatment. H. P.

THE FRINGED HOUSELEEK.

(SEMPERVIVUM FIMBRIATUM.)

This beautiful Sempervivum will grow quite as happily over the surface of a rock as the Sengreen or common Houseleek will over the roof of an old tiled building. The very name Sempervivum is derived from *Semper vivo*, to live for ever, in allusion to the well-known tenacity of the species. Sempervivum fimbriatum is specially to be commended for the rock garden. It is a native of the Alps of Dauphiné, and is uncommonly attractive when in flower, usually in July or August. The inflorescences are from 6 inches to 10 inches above the rosette of foliage, and the individual flowers are bright rosy red in colour. The flowers, which are about an inch in diameter, are delicately fringed, and borne profusely in branching panicles. The leaves are usually green, with the outer ones turning red, but position, and possibly the rooting medium, affect the colouring of the rosettes considerably. It is very easy to establish between the chinks of rocks or on old ruins, where just a little soil may be placed at planting-time. Like most of its family, it may be increased by offsets, which are abundantly produced.

A BEAUTIFUL EARLY CROCUS.

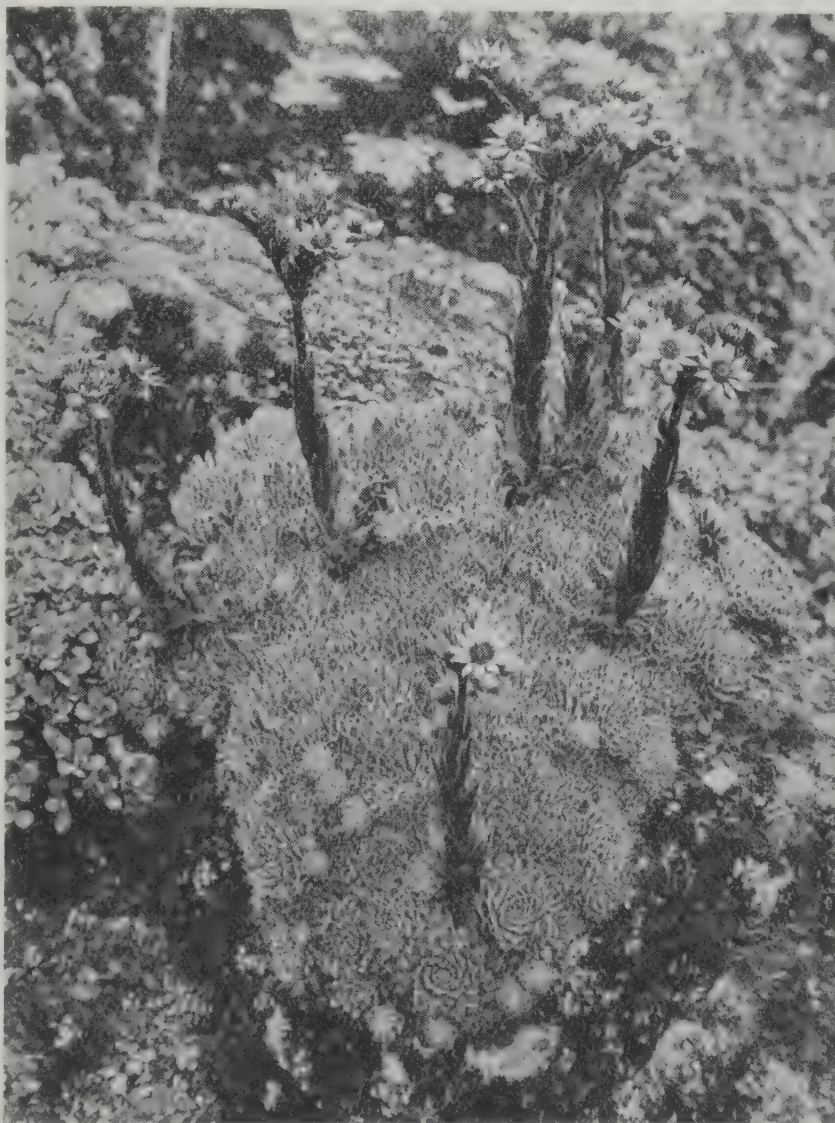
CROCUS IMPERATII, a delightful Italian species, is one of the first to show colour. The interior of the sweetly scented flowers is lilac purple, while the outside of each segment has three dark purple lines. The pretty effect produced at this season when grown in quantity is not readily surpassed. It is a good Crocus for planting on lawns, but is seen to even better advantage on a sheltered slope of the rock garden. There are several varieties of C. Imperatii, including a white form as well as a double-flowered one.

IN A HAMPSHIRE GARDEN.

SOME OF THE NEWER CLIMBING ROSES.

(Continued from page 35.)

Miss Hellyett (Fauque et Fils, 1910).—This is one of the largest-flowered of all the wichuraianas. The blooms are produced generally on single foot-stalks, and in the bud are very beautiful, not unlike Lady Waterlow. The open flower, however, resembles Mme. Antoine Mari. A very beautiful Rose and a very rampant grower; its only fault is that it is not particularly free-flowering with me. This may be due to its position in my garden, as it is facing almost due north.



THE FRINGED HOUSELEEK GROWING OVER A BOULDER IN THE ROCK GARDEN.

Mrs. M. H. Walsh (M. H. Walsh, 1913).—My plant of this has not flowered, but it was strongly recommended to me as by far the best white wichuraiana, and with our White Dorothy Perkins insisting on throwing pink flowers with the white, it should find a place. It flowers in clusters; the flowers are double and rather larger than White Dorothy.

Rowena (W. Paul and Son, 1912).—This is quite good. The colour is distinct and a pretty shade of carmine pink. The flowers are produced in fairly long clusters, though they are not too thickly placed on the panicle, which is, to my way of thinking, a distinct advantage.

Shower of Gold (Paul and Son, 1910).—This is one of the best of the yellows. The flowers are produced singly all over the plant. Here again the

foliage is very fine; not quite up to Klondyke, perhaps, but similar.

Source d'Or (Turbat and Co., 1913).—This is strongly recommended to me from the Continent as a large-flowered yellow, with very vigorous growth for a plant of that colour. The plant I have promises well, but I have not flowered it yet. To pass to other sections:

Adrian Riverschon (Lambert, 1910).—This is a single Rose, a rather thin-looking Leuchtstern, with considerably more white in the centre of the flower; a Polyantha.

Ariel (Paul and Son, 1910).—Another Polyantha, but sometimes called a hybrid wichuraiana. It is a pretty, single-flowered, bright pink, with coppery-coloured buds; a good grower; best described, perhaps, as a single Tea Rambler.

Florence H. Veitch (W. Paul and Son, 1911).—A fine, bright, almost scarlet, crimson flower, but only a semi-climber; best grown as an isolated bush, or would make a good dwarf pillar Rose. Sweet-smelling; flowers not very full, but lasting well.

Climbing Lady Ashtown (Bradley, 1910).—This has been good with me, and but for its liking for mildew could be highly recommended. It is quite free-flowering and continuous, but the first flowers are the best, both as to size and colour. The difficulty is to prevent the plant getting leggy at the base. For this reason it should be on a pergola, and then its legs can be trousered with another plant.

Climbing Richmond (Alex. Dickson and Son, Limited, 1912).—This has been excellent with me in 1913. Cut down to the ground in 1912, it spent the summer making wood which has bloomed freely, and I have now some nice shoots for this year on an arch; but it is not vigorous nor spreading enough to cover the same, and must have company. It is much to be preferred to Climbing Liberty, which has refused to climb here, although I have seen some very fine plants of it under glass.

Climbing Mme. Melanie Soupert (Burrell and Co.).—All lovers of this Rose will welcome its climbing form, which will be distributed this summer by Messrs. Burrell. I have a very fine plant that shows that there is no doubt about its climbing; but I have not yet flowered it, and am looking forward with a considerable amount of

pleasurable anticipation to doing so. It is a great addition to these climbing sports.

Climbing Souvenir de Pierre Notting (Frank Cant and Co., 1912).—I have already mentioned this in THE GARDEN. It is quite one of the best of the rather long list, and is still giving me flowers from the laterals of last year's growth. Strongly recommended, as it is a very vigorous grower, much more so than most of these climbing sports.

Moonlight (Rev. J. H. Pemberton, 1913).—As a bush or dwarf pillar, this is a very great addition to the perpetual semi-climbers. The flowers are produced from June to November in clusters, after the style of Trier, without any of the pink that shows in the buds of that variety. Its colour is lemon white and the flowers are semi-double.

Danae (Rev. J. H. Pemberton, 1913).—This is of similar growth and habit, but the flowers are much fuller and have more colour in them. The buds are deep yellow and the open flowers pale yellow, of the size of a florin. I think both these Roses of Mr. Pemberton's raising can be strongly recommended. We want perpetual-flowering Roses very badly.

Pink Pearl (Hobbies, 1912).—This has Irish Elegance for one of its parents, and it has retained some of the beauty of its parent. It is not quite single, but makes a very effective pillar when fully out.

Sheilagh Wilson, Hybrid Tea (Paul and Son, 1912).—This is a very lovely single; a semi-climber that flowers again in the autumn; but so far with me is neither very vigorous nor very free-flowering. But the plants are young yet, and may improve in both aspects.

The award was unanimous. The accompanying illustration will give some idea of the erect character of the stems and the graceful poise of the flowers. From the St. George's Nursery Company, Harlington, Middlesex.

NEW ORCHIDS.

Cypripedium Julian.—A flower of remarkably good form, with a broad, overarching dorsal. Parentage: Vandyke × Ædippe. The general colour is greenish brown, the dorsal being white suffused with rosy pink. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O. First-class certificate.

Awards of merit were given to the following: *Odontoglossum illustrissimum* The Dell Variety, sent by Baron Bruno Schröder; *Odontioda* Royal Gem Westonbirt Variety, from Lieutenant-Colonel

THE PERENNIAL STOCKS.

THE *Matthiolas* are interesting plants which belong to the Mediterranean regions; there are three or four dozen different kinds, half of them being annual or biennial. Of the perennial ones, the following are grown in alpine gardens:

Matthiola fenestralis, growing wild on the sea rocks of the island Cretica, and nowhere else. It seems to be a dwarf form of *M. incana* (one of the ancestors of the common Stock), with thick, undulate and spirally rolled leaves, deep carmine petals and very thick siliquæ. In Cretica the people grow this plant in pots in their windows; hence its name *fenestralis*. It is half-hardy with us (at *Floraire* we have to cover it through the winter), and wants a dry place in the full sun.

M. sinuata, well known by everybody who ever saw the Mediterranean coasts, and generally considered as a biennial, although it, in certain conditions, proves to be quite perennial. The plant, Mediterranean by its origin, grows wild at the ocean coast, and goes so far as England. It is a sweet-scented plant, the flowers of it being light lilac and expending a delicious fragrance, but only in the evening and in the night.

M. Aristis is a curious plant, rather rarely found, growing wild here and there in the South of France, in Spain and Portugal, in Sicily, in Greece and in North Africa. I found it once in my life in the very beautiful Gorges du Verdon in the Var. It grows there in the white and barren sandy loam at very sunny places, and is the only plant growing in it. Very cæspitose, of stoloniferous nature, with dark green, somewhat greyish, dentate leaves; flowers in large spikes, dull purple, and without any smell, so far as I know. At *Floraire* we grow it on the top of our wall, and it flourishes there and gives good seeds.

M. varia is near to it and is a child of Greece, where it grows near the sea-coasts. It is a stoloniferous kind, too, and has large light, purple flowers.

M. valesiaca* and *M. pedemontana are near to it, but very different in their requirements; they are really

wall plants, and the most stoloniferous of all. The first is the rare plant of the Simplon Road in Valais; it is found still in the very near valley of Binn, and, further to the East, near the Lago d'Garda, where I was very surprised last July to find my country plant, which I thought was a true Swiss child, growing between the rocks of Tremonie and near Riva. The plant is a delightful one, very creeping, its long and slender rootstock bearing its new rosettes everywhere. Sometimes *M. valesiaca* covers an area of several mètres in a rockery. It is a plant for the moraine, in the true sense of the word, or for the wall garden. The foliage of *M. valesiaca* is silvery grey, and the flowers of a reddish purple. *M. pedemontana* differs from it by its slenderer growth, its leaves narrower and thinner, and its flowers greenish brown, of a very rare and curious colour. It needs the same culture as *M. valesiaca*.

Floraire, Geneva.

H. CORREVON.



NEW CYCLAMEN MRS. L. M. GREAVES. THIS OBTAINED AN AWARD OF MERIT LAST WEEK.

Thelma (W. Spooner, 1912).—A very effective and bright colour, with delightful single flowers. The plant is vigorous and the flowers are large for a single. A Rose of much promise.

Southampton.

HERBERT E. MOLYNEUX.

NEW AND RARE PLANTS.

Cyclamen Mrs. L. M. Greaves.—Departing from its usual custom, the floral committee gave this distinct and good sort an award of merit as a named variety, thus stamping it as one of unusual excellence. The colour is rich and deep—cerise, with a suffusion of salmon—and unlike anything before known in the Cyclamen. The foliage is slightly marbled. All the plants shown were true to their kind, thus demonstrating that the variety comes practically true from seeds

Sir George Holford; *Odontoglossum* Canary and *Cymbidium* Schlegeleri punctatum, from Pantia Ralli, Esq.; and *Cymbidium* coningsbyanum, shown by Mr. G. Hamilton Smith.

NEW FRUIT.

Citrus japonica.—The value of this species is ornamental rather than useful. The fruits, which are about the size of Walnuts, are lemon colour and almost spherical. Several plants about two feet high, carrying heavy crops, were shown, and were evidence of their usefulness for decorative purposes. When quite ripe the fruits are pleasant to the palate. Exhibited by Messrs. James Veitch and Sons, Limited. Award of merit.

The foregoing plants were granted awards by the Royal Horticultural Society on January 13.

GARDENING FOR BEGINNERS.

HOW TO GROW EARLY TOMATOES.

WHERE there are suitable structures and plenty of artificial heat, very little difficulty need be experienced in the growing of very fine crops of Tomatoes.

This condition obtains, of course, where experienced cultivators are concerned. In ordinary circumstances the general cultivator

pulling it in pieces, and some half-decayed leaf-soil passed through an inch mesh sieve. Stack this compost in a cool shed, or, if in the open, cover the heap to keep off rain until required for use. The compost for the seeds should be of a similar quality, but much finer. Use pots or pans in which to sow the seeds. Always remember that Tomatoes thrive best in a very warm, sunny position. If such be available now, raise the seedlings in it.

How to Raise the Seedlings.—Fill pots or pans as shown in Fig. A at No. 1, which denotes drainage and coarse material such as leaves and rough, turfy compost; No. 2, a layer of finer compost; and No. 3, the seeds lightly covered. As stated above, place the seed-pots on a stage in a warm position and keep the soil in a moist state, but never very wet, else the seeds will decay and not germinate. All necessary moisture should be afforded by holding the pot in a vessel of tepid water until the surface of the soil becomes dark; then gently lift the pot. Probably only one watering will be needed, as the seeds germinate in a few days where there is enough heat and moisture. A sheet of glass may be placed on the pot to conserve moisture until the seedlings break through; then it must be removed, but it is not advisable to put brown paper or moss on the glass. The young plants must be brought on as steadily as possible. When the seedlings are at the stage shown at No. 4, lift and transplant them 3 inches apart each way in pans or boxes. At the stage shown at No. 5, transfer them to small pots, No. 6.

The Training of the Young Plants.—From this stage onwards side shoots will grow freely, but they must not be left on to attain to a length beyond an inch or so. On the young plant, No. 7, these side shoots are shown at Nos. 8, 8. From the 5-inch pots the plants must be shifted to those in which they are to fruit, or to the boxes or restricted beds, as it is good policy to restrict the roots to a given space, especially in the case of the earliest crop.

Positions in which to Fruit the Plants.—There is much available space in many green-houses and small structures that might be used if some staging of a temporary character were erected. No. 1 in Fig. B shows how the plants may be grown in a deep, heated pit. Other kinds of plants may be grown in the same structure if the Tomatoes are trained 3 feet apart. In many lean-to houses there is some wall space on the back wall above the stage, and quite a number of plants may be grown and trained there, as shown at Nos. 2 and 3. Of course, there is always that good position at the front of the house where there is generally room for a few plants on the stage, No. 4. Grow the plants in a rich, fibrous loam, made moderately firm. A sandy loam needs no sand, but a retentive one requires sand and leaf-soil. When two or three trusses of fruit have set and are swelling freely, top-dress the soil, as shown at No. 5, and feed the plants with liquid manures and approved chemicals.

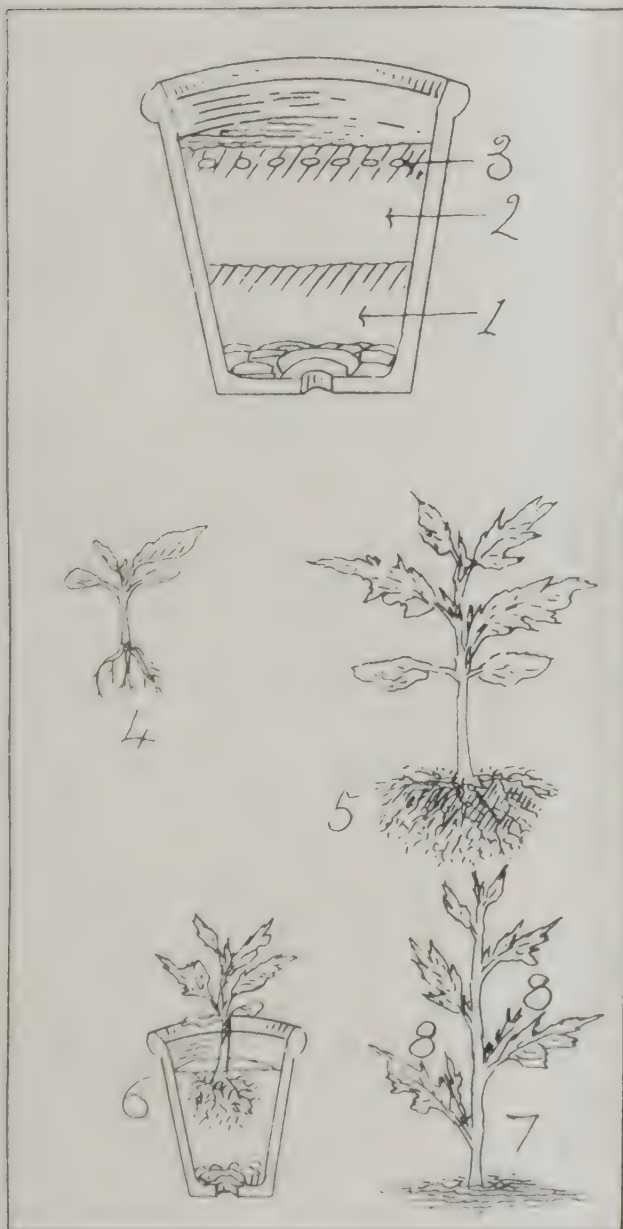
CINDERS AND CEMENT FOR GARDEN PATHS.

It is always a pleasure to walk on a firm, dry path. One often sees new paths made by the laying down of a thin coating of rather rough gravel. A path of this kind is never satisfactory. If the

rough gravel is laid thick enough and then properly surfaced with finer gravel, the path will be improved as time passes; but so many lovers of gardens are not able to procure good gravel without going to considerable expense. I am now referring to gardens in town and suburban districts. In many of them cinders are plentiful, and both the cinders and cement can be obtained without much trouble or expense.

Mark out the space for the path and remove the soil to a depth of 5 inches; then put in the roughest cinders to a depth of 3 inches, and water them so that they can be easily firmed and provide a good base for the cinders and cement. Place some fine sifted cinders in a bucket, add pure cement to the extent of one-third the bulk (do not use any sand), and then pour in water, mixing the cement and cinders until the mixture is of the consistency of mortar. With the aid of a bricklayer's trowel spread out the mixture to a depth of 2 inches, leaving an even surface. On the latter sprinkle at once a few dry cinders, and gently press them in with the back of a garden spade. The surface will not then be slippery; the general appearance will be pleasing and the path lasting. No weeding of paths will be necessary. Do not use the cement in frosty weather.

SHAMROCK.

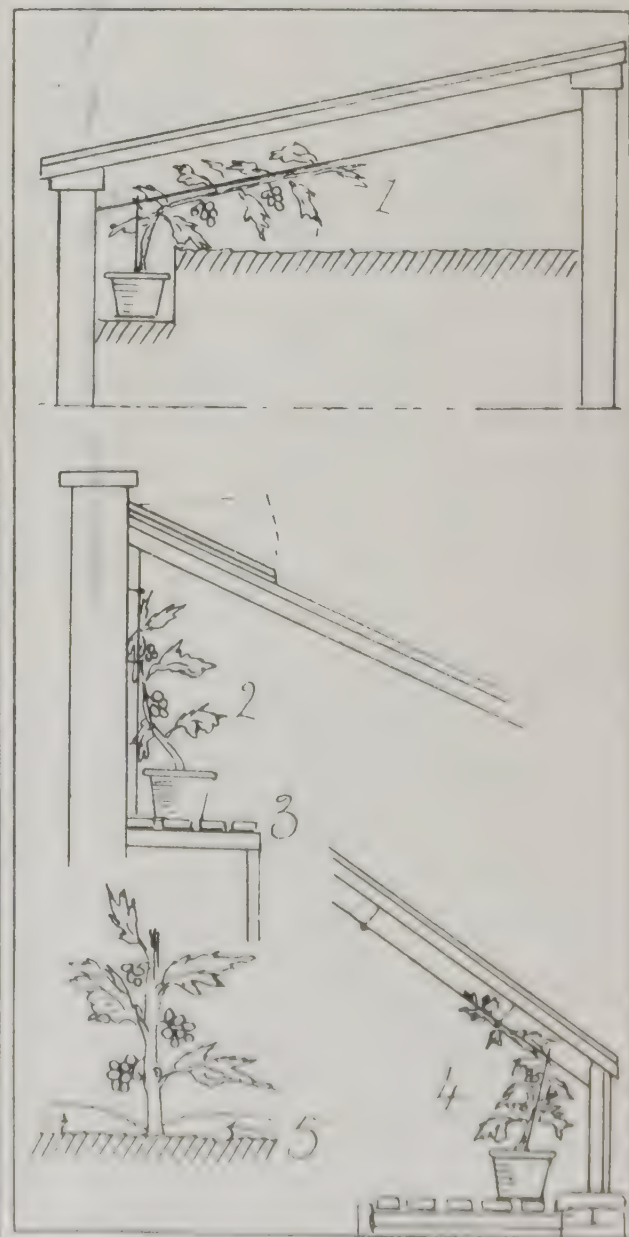


A

RAISING TOMATOES FROM SEEDS, AND SHOWING HOW TO POT THEM OFF.

can secure a medium crop. We, however, wish the beginner to succeed in growing a big crop. Usually, early in the season there is considerable loss through failing to get the first-formed trusses of fruits to set. It is quite time now to make a beginning by sowing seeds and preparing generally for the due potting or boxing of the resultant plants.

The Best Soil.—Some inexperienced cultivators believe that the wisest course to follow is to grow the plants in a poor soil. Now, if we were intending to grow them in a deep border in the open air, or even under glass, we would prefer a poor rooting medium to a rich one; but as the bulk of soil is comparatively small, confined as it will be in flower-pots or narrow, shallow boxes, it ought to be of very good quality. To this end prepare some very fibrous loam by



B

SHOWING POSITIONS IN WHICH THE PLANTS MAY BE GROWN

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Early Permanent Vines will now be in flower, and consequently less atmospheric moisture will be necessary. Shake the trellis several times during the early part of the day in order to distribute the pollen, and do not allow the foliage to come in contact with the glass, but direct the shoots gradually towards the trellis a little at a time. At this stage a night temperature of 70° may be allowed while the weather is mild; but if cold weather sets in, it is better to drop the temperature to 65° than to employ too much fire-heat to keep it up, and during bright days the temperature may be allowed to rise to 90° by sunheat. Ventilation must be given with great care and only at the top of the house, and this should never be applied with a view to lowering the temperature.

Early Peaches and Nectarines in Pots.—The mild weather has been all in favour of forcing, and the early trees will now have set their fruits. Do not attempt to thin the fruits much at present, but leave all on the upper side of the branches for another ten days. In disbudding, which should be done a little at a time, leave a well-placed shoot as near the base of the branch as possible, with one or two on the sides of the branches, which may afterwards be shortened back to two or three leaves, in order to form young spurs for another season's crop. Great care is necessary in watering these trees that the soil does not become sour, or many of the fruits will drop. A night temperature of 55° will be quite high enough for the present. Syringe the trees lightly on bright days, and keep a careful watch for green or black fly, which may be kept in check by the use of a little Quassia Extract while syringing the trees in the afternoon.

The Orchard-House.—The trees in this house must be started into growth with care. They should never be excited by much fire-heat until the flowering period is over, or weak flowers and an inferior set of fruit will be the result. If the trees are potted in suitable soil, no manure-water will be necessary until the fruits are set. Syringe the walls and floor of the house to promote a moist atmosphere. A temperature of 50° at night in mild weather is quite high enough.

Plants Under Glass.

Smilax.—In order to produce Smilax in quantity for decoration, seeds should be sown now in pans of fine sifted soil, covered lightly and placed on a hot-bed. When large enough to handle, the seedlings should be potted into 2½-inch pots and afterwards into 3-inch pots, growing them in a temperature of 70°. At Frogmore these plants are trained to green string on the back wall of a vinery or Peach-house, and planted in a compost of loam and leaf-soil with sufficient sand to keep the soil in a porous condition.

Asparagus Sprengeri may also be sown now and treated in the same way until the plants are finally placed in large baskets and hung in a warm Palm-house or conservatory. When well established in the baskets, the roots may be frequently soaked with weak liquid manure. The greatest danger to these plants is want of water at the roots.

The Flower Garden.

Cold Pits containing autumn-struck plants of Calceolarias, Pentstemons, &c., should be freely ventilated to keep the plants from becoming drawn. Pinch the tops out of Pentstemon plants to encourage side shoots, and when these have become prominent the plants may be potted into 4-inch pots and grown near the glass in the same pit. Calceolarias may be treated in a similar way; but if standard plants of *C. amplexicaulis* are required, they must be grown on single stems until they reach the necessary height, when the tops must be removed.

Marguerites and Heliotrope struck in September should be potted without delay and placed in gentle heat. If the plants have become drawn, they should be cut back and allowed to remain until side shoots appear before they are potted.

Lobelia cardinalis Victoria.—This beautiful perennial, with its dark metallic foliage and bright

scarlet flowers, may easily be increased by division of the roots now. These may be potted into 3-inch pots and grown on a bed of ashes in a cold pit, or seeds may be sown now and placed over a gentle bottom-heat. If potted up as soon as ready, they will make nice plants for bedding out in May, and should flower in the month of August.

The Hardy Fruit Garden.

Orchard Fruit Trees.—All new plantations should be finished as soon as possible. Each standard tree will require a strong stake as soon as planted, and if sharp frost or drying wind should prevail, a mulching of some kind should be placed over the roots. In exposed positions the stems may be protected by hay-bands to prevent evaporation.

The Kitchen Garden.

Large Onions.—If large Onions are required, the seeds should be sown about the end of January. Sow in boxes of fine soil and place them in a slightly heated pit. The soil may consist of good sandy loam and leaf-soil, and should be pressed tightly into the boxes. Sow the seeds thinly, and as soon as the plants appear they should be given sufficient air to keep them stocky.

Leeks may also be sown now and placed in the same pit for the time being.

Seakale.—Roots intended for forcing should be lifted at once and placed behind a north wall. These roots should be put in an upright position and covered with soil until required for forcing. As this work proceeds, sufficient clean thongs should be selected for the propagation of next season's plants. These cuttings may be placed in a horizontal position, quite close together, and covered with 4 inches of sandy soil. By April they will be ready for planting out.

Peas in Pots.—An occasional dish of Peas may be obtained by sowing in pots at frequent intervals from now until the end of February. Eight-inch pots are large enough, and the soil may consist of three parts rich loam and one part decayed manure. A well-ventilated house or pit is necessary.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Horse-Radish.—As a rule, Horse-radish is generally grown in the most out-of-the-way part of the garden, and perhaps for many reasons this is as it should be, as it is neither fastidious as to soil nor situation. At the same time, it will pay to give it a little more attention than it usually receives. Now is a good time to make a new plantation, and in doing so have the ground trenched two spits deep, adding some well-rotted manure. In planting, see that the crowns are placed at least 4 inches or 5 inches deep. If time permits, it is well to replant each year.

Broad Beans.—If a sowing of Broad Beans was not made in the late autumn, no time should be lost in putting in a few rows for an early supply. The seeds should be sown in a fairly moist part of the garden, as the plants will not stand drought. To guard against mice, rub the seeds over with red lead, or stand them for a few hours in paraffin before sowing.

Peas.—It is still too early to sow Peas out of doors, at least in the colder climate of the North, but a sowing might well be made now either in pots, cutting-boxes or strips of turf and placed in a cold frame. Some early dwarf variety, such as English Wonder, is best suited for this sowing.

Dwarf Beans.—A dish of Dwarf Beans is usually very much prized in the early spring. A sowing made now will, for ordinary purposes, be early enough. A number of pots may be sown and placed in a brisk heat; the seeds would, of course, do equally well in long, narrow boxes. Last season I grew this batch in ordinary Tomato boxes, with very good results. Water should be given very sparingly at first, otherwise the young growths turn yellow, which will spell failure.

Autumn-Planted Cabbage.—On an early border autumn-planted Cabbage will be all the better for a slight dressing of sulphate of ammonia between the drills if the weather is favourable. An open handful to every 3 yards is sufficient. Afterwards run the Dutch hoe between the rows.

Mushrooms.—These may be had almost all the year round, provided one possesses the necessary accommodation. Those, of course, who only possess a single house have to be content with a crop occasionally. Still, it is surprising what results one can get by making up a bed in odd corners, provided the place selected can be kept at an even temperature without the aid of fire-heat. Collect sufficient horse-manure as will make up a bed (not an easy matter in these days of motors), place in a dry, open shed, and turn every day for about a fortnight. When sufficiently dry, throw into a heap. For a number of years I have mixed a fair quantity of dry leaves with the manure before making up the bed, which, I think, tends to preserve the heat. In making up the bed, distribute the manure evenly over the surface and tread it firmly. The temperature will rise very rapidly, and the bed may be spawned when it has dropped below 90°.

The Flower Garden.

Sweet Peas.—Sow the main batch of Sweet Peas now either in boxes or pots and place them in a cold frame. This method of raising Sweet Peas is becoming more popular each year, and to my mind rightly so. It is a fact that with proper management they can be had in bloom as long from a sowing made now as they can from one made out of doors in March. It is a good plan to chip the seeds of very scarce varieties to ensure germination. Previous to placing them in the frame, give the surface a good dressing of soot, as slugs play great havoc just as the seedlings are pushing through the soil.

Delphinium Belladonna, if sown in mild heat now, will bloom in the late summer and early autumn. It is a lovely shade of blue, and is sure to give the greatest satisfaction to all who grow it. Last season I planted it with Sutton's Blue Nemesis, and it was greatly admired.

Spiraea ariæfolia.—One could scarcely imagine anything more handsome than a few plants of *Spiraea ariæfolia* dotted through the border. All these ought to be planted now, for if done later they do not start away so readily.

Plants Under Glass.

Crotons.—Cuttings may now be put in the propagating-case. Ring those plants that have grown rather tall.

Dracænas.—Those who wish to increase the stock of *Dracænas* may do so now by cutting up the stem into pieces about an inch long. Place them in shallow pans, and keep them where they will have the benefit of a brisk bottom-heat.

Gloxinias.—If a sowing of Gloxinias is made now, the young plants will bloom in the late summer, which will add a nice bit of colour, either for furnishing stands indoors or placing among the *Adiantums* in the fernery.

Carnations.—Soil should now be prepared for potting on the young Malmaisons layered in the autumn. It is always wise to have the soil prepared some little time beforehand, and in doing so add a 6-inch potful of hot lime to each barrow-load of soil, and turn frequently.

Cypripediums.—The present will be a suitable time to look over the *Cypripediums*, and any that show signs of going back may be shaken out and repotted in a mixture of good fibrous loam, peat and sphagnum moss. Others may only require top-dressing. In either case water very carefully at this stage.

Fruits Under Glass.

Vines.—Attend carefully to disbudding Vines that were started in late December. This work should be done very gradually and by an experienced person. In a number of cases two shoots should be left to the spur until one is able to see which is showing the better bunch. On fine days, and when much heat is used, keep a good deal of moisture about; but discontinue syringing the Vines.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON
SWEET PEAS.

FROM the present time and onwards the Sweet Pea enthusiast knows no idle moment. Each week, as it comes round, brings its own particular needs, and if fine exhibition blooms be the desired goal, then the grower must give careful attention to every detail in the cultivation of his plants.

Ordering Seed.—Long before these notes appear the real enthusiastic Sweet Pea grower will have procured his seed, and if he be a devotee to autumn sowing, his seedlings will be requiring attention. But procrastination always holds a firm grip on some people, and to them delay in purchasing seeds is deadly dangerous. For several years the seasons have been bad and the crops small; and although one may hope that the past season may be the last of these lean years, yet both buyer and seedsman must suffer, for the supply cannot equal the demand, and the buyer receives less seed for his money. However, so far as reports can be relied upon, the shortage of seed this year is slightly compensated by the excellent germinating quality of the seeds. Intending growers, therefore, should immediately peruse the advertisement columns of THE GARDEN, in which several reliable seedsmen are advertising, and, a choice having been made, an order should be despatched without further delay. In previous notes contained in the issues of THE GARDEN for December 20, 1913, and January 3, 1914, lists of varieties suited for exhibition and garden purposes respectively were given, and a reference to these will make a selection more easy. I would recommend that several extra varieties be named as substitutes, for in all probability many varieties will have been sold out because of the general shortage of seed, and especially that of the newer varieties.

Preparation of the Ground.—The ground should have been prepared in the autumn, but if circumstances have prevented this work being done, then as soon as possible it should be deeply and well cultivated, incorporating into it good decomposed manure. Allow the soil to settle down before planting, for loose soil is detrimental to successful growing of Sweet Peas.

Seed-Sowing.—This may be done any time from the present, just when the opportunity suits the particular grower. Plant either in pots or boxes in rows; in many instances, where the grower cannot give daily attention, the Sweet Peas thrive best in boxes, which have less chance of getting dry and thus checking regular growth. Sheets of paper or glass placed over the boxes or pots assist germination, and directly the seedlings appear these should be taken off and the plants well exposed to the light, encouraging throughout a slow, sturdy growth. For the seedlings from an autumn sowing a potting on will be beneficial, and they should be pinched (if not already done) to cause new growths from the base. "Potting on" may seem rather a tall order, but the increased vigour resultant from so doing fully compensates for the labour it necessitates. After repotting, if the plants are in frames, it is advisable to keep them fairly close for a few days, and, of course, protect them by coverings on frosty nights.

Labels.—Where these are used (and most growers are kind to their novice friends by labelling

their Sweet Peas) it will be well to utilise any odd moments in preparing them, for little time can be spared later on in the spring for this important work. Referring to names and their multiplicity, one of the pleasing features in many catalogues received is the attempt to obviate this difficulty by carefully arranged lists of best varieties. The catalogue of Hallams, Moseley, Birmingham, is excellent in this respect, and forms a most useful guide, especially for amateurs, who are generally the chief sufferers, often buying the same variety under various names. That of Robert Sydenham, Limited, Tenby Street, Birmingham, is also good, having a well-arranged alphabetical list of the best sorts, from which a selection can easily be made; while their presentation coloured plate of Sweet Peas Barbara, Princess Mary, Zarina Spencer and Edith Taylor well illustrates these good varieties. Dobbie and Co., Edinburgh, the well-known Sweet Pea firm, give excellent and full cultural notes in their catalogue, a delightful production replete with useful information on all matters connected with the garden, and well on a par with other specialities sent out by this noted firm. Space prevents more than a mere mentioning of the catalogues of Unwin, Dipnall, Bide, and Deal, each full of interest, and I close these notes with congratulations to those seedsmen who have endeavoured to meet and overcome the difficulties that have hindered the progress of the Sweet Pea, and wish them success in the coming season.

S. M. CROW.

A FINE APPLE ORCHARD.

NOW that more interest is being taken in Apple-growing in this country, it is just as well to look about and note the most approved methods of cultivation before embarking on the subject, either for profit or home consumption; and as the old-fashioned orchard on grass has still many adherents, I will briefly describe the result of high-class cultivation as practised at Aldenham House, Elstree. I perhaps know more about the gardens at Aldenham than the majority of visitors, as it has been my pleasure during the last twenty-five years to pay at least an annual visit of some days and, naturally, I note what my good friend, Mr. Beckett, does in the way of extending these princely gardens in obedience to the wish of his enthusiastic employer, the Hon. Vicary Gibbs.

As the season for planting Apple trees is still with us, I thought these notes would help intending planters. The orchard in question occupies some ten acres and is all on grass; originally it was but half the size. The trees are wholly of the standard or half-standard type. Half the trees were planted thirty-seven years ago, but were not a success, and as the subsoil naturally at Aldenham is clay, it was suspected that the rooting conditions were unfavourable. It was decided to replant the trees and add more land to the orchard. Thus, in the year 1886 the work of renovation was begun, this being completed the following year. The land was thoroughly drained and entirely trenched from 3 feet to 4 feet deep, adding any lightening material available, such as burnt earth, to render the soil porous and naturally warmer. The trees were replanted, allowing abundant space between them and as much as 50 feet between the rows. The trees were annually and carefully pruned with a view to obtaining as large an area as possible, at the same time keeping the

branches thin and allowing plenty of light in the centre of the trees. The trees were carefully attended to in regard to insect pests, lichen and so forth. Singular to say, the latter is not very troublesome, owing, no doubt, to the favourable rooting conditions and perfect drainage. In many orchards the excessive crops of moss and lichen present are traceable to the unsuitable subsoil, which is, in some cases, so impervious that water from excessive rains cannot quickly get away, thus causing stagnation of the roots.

Below I give the names of some of the larger trees, with their spread of branch and approximate crops of fruit last season. Nowhere have I seen Wellington succeed better than here. The trees grow freely and crop annually, giving handsome, clean fruits, which keep remarkably well, thus displaying this valuable Apple at its best. Cox's Orange Pippin is a fine tree, in spite of the assertion of some writers that this Apple as a standard is not a success, although last year it did not carry a large crop. Hambledon Deux Ans, Small's Admirable, Lord Derby and a special form of Blenheim Pippin are a special success. New varieties are added as they appear.

Variety of Fruit.	Circumference of Branches. Feet.	Quantity of Fruit. Bushels.
Blenheim Pippin	102	18
Bramley's Seedling	87	12
Fearn's Pippin	86	16
Cox's Orange Pippin	78	8
Golden Noble	81	12
Gascoyne's Seedling	97	8
Hambledon Deux Ans	103	8
King of Tompkins' County	90	6
Lord Derby	94	27
Small's Admirable	87	20
Mère du Ménage	66	18
Tower of Glamis	84	12
Wellington	71	8
Warner's King	81	16

Swanmore. E. MOLYNEUX.

GARDENING ACROSTICS.

DOUBLE ACROSTIC No. 8.

- Firsts.—A celebrated Dutch florist of the eighteenth century (his surname).
Lasts.—The flower which he improved.
1. A horticultural distinction.
2. Found in compound words, denoting sharp or acid.
3. A tribute of Regel to a Russian brother botanist.
4. A good early Plum.
5. Sunflowers.
6. An Auricula man of a century ago (surname).
7. A retarding influence.
8. I look like what I am popularly called, but not like what I am.

Solutions of the foregoing must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C, not later than the first post on Saturday, January 31. Mark the envelope "Acrostic" in the top left-hand corner.

SOLUTION AND NOTES OF
ACROSTIC No. 6.

CONRAD—GESNER.

- * 1. C ORN-FLA G
- † 2. O VUL E
- ‡ 3. N EPHROLEPI S
- § 4. R AMPIO N
- || 5. A PPL E
- ¶ 6. D EODA R

Conrad Gesner, born in 1516 at Zurich, has been called the Pliny of his time. He published a

"Historia Animalium," and at the time of his death he had collected 1,500 drawings for a history of plants. He died of the plague in his forty-ninth year.—Arber's "Herbals," pages 90 to 93. * Corn-flag is given in all gardening books as the English name for the *Gladiolus*. † The ovule after fertilisation develops into the seed. ‡ Nephros, of which *Nephrolepis* is compounded, is the Greek word for kidney. The coverings of the sori are more or less kidney-shaped. § *Campanula Rapunculus*. Rapa is a small Turnip. Prior gives the derivation of Rampion from the French "raiponce," to which "m" has been added for the sake of euphony.—Prior's "Popular Names of British Plants." || See Richard Folkard's "Plant Lore." No fruit, he says, is so famous in fable and history as the Apple. In Britain it gave its name to the "Isle of the Blest" (= Avalon), and in Saxon times one of the Coronation prayers was "that this land may be filled with Apples." ¶ *Cedrus Deodara*, or the Indian Cedar, a native of the Himalaya, is frequently mentioned in old Indian hymns and poems. On account of its graceful habit it is a favourite tree for ornamental planting. We speak of it as the Deodar.

RESULT OF ACROSTIC No. 6.

In this acrostic it was possible to obtain eight marks, one for each correct "first" and "last," and one for each correct light. The following have been awarded:

Eight marks.—R. Chapman, M. Browne, "Jan," "Tempus Fugit," N. E. Hadden, W. J. Wigston, "Shamrock," G. D. King, "Brixtonian," "Penwarne," "Bow," "Rusticus," "St. Kevins," "Ping," "Elm," "Nautilus," W. Bond, "Johnny Crow," L. Biggwith, "Miller," "Hero," Ernest Ballard and "W. R. D."

Seven marks.—"Westbank," "Bees-Wing," Wm. Slocombe, "Rustic," "White Lady," "M. M.," "Boarsvale," "Scotia" and A. Henderson.

Six marks.—Miss G. H. Jeffreys and H. J. Giblett.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

WATER LILY POOLS (H. F. M.).—It is quite natural for the leaves of your Water Lilies to die in the winter. The opportunity should be taken to clean out the tanks while the plants are at rest. Remove all mud and give new soil if necessary. Scrub the sides of the tanks and make everything as clean as possible. You will doubtless obtain flowers next summer. In the event of the green scum growing next summer, add copper sulphate to the water at the rate of one part of the chemical to 1,000,000 parts of water. If you calculate the cubic capacity of the tanks and then assume that each cubic foot of water weighs 62½ lb., you can easily ascertain the correct amount of copper sulphate to use. Tie the

copper sulphate in canvas, and draw it about in the water until dissolved. Two or more applications may be necessary during the summer.

SMALL VIOLETS (C. E. F. M.).—There is nothing about the flowers sent to account for their small size. Perhaps the plants are fed too well with nitrogenous food, or kept a little too dry, or belong to a poor strain. But there may be something wrong with the plants. The material sent is too scrappy to enable us to say.

HERBACEOUS LOBELIAS (P. H. J.).—The nearest approach to crimson in these is in the variety *Queen Victoria*, which is more scarlet than crimson. *Cardinalis* and *Firefly* also have brilliantly coloured flowers. If the pots were of reasonable size, say, 6 inches to 9 inches across, the plants would do quite well plunged in the bog-bed as you suggest, though we should expect to find them quite hardy if planted out in your district. The plunging in pots, however, is not essential, as the plants move quite safely if lifted with a small ball of earth. Even if a few were lost, they are easily reproduced by means of seeds, and these, if sown in January, make flowering plants in the same year if given liberal treatment. Hardy Orchids suitable for the bog-bed should include *Cypripedium spectabile*, *C. pubescens*, *C. parviflorum*, *C. montanum* and *C. Calceolus*. To these should be added *Orchis foliosa*, *O. latifolia*, *O. maculata*, *O. Mascula* and *O. purpurea*, all of which are interesting and beautiful.

TREES AND SHRUBS.

MYRTUS UGNI AND RED BERRIES (S. S.).—The shrubs sent are correctly named *Myrtus communis* and *M. Ugni*. The latter plant is also referred to as *Eugenia Ugni* perhaps more frequently than *M. Ugni*. The red berries are quite correct for this species. Black fruits are borne by a closely allied species which is sometimes confused with *M. Ugni*.

SHRUBS TO COVER FENCE (J. H.).—The following plants are suitable for your purpose: *Escallonia langleyensis*, *Solanum jasminoides*, *Ceanothus veitchianus*, *Jasminum nudiflorum*, *Rubus bambusarum*, *Solanum crispum*, *Berberidopsis corallina*, *Rosa bracteata* and *Vitis Cignetiae*. The first named should be given a prominent position, for it is evergreen and very showy. All are, however, of first-rate worth. Those which are not strictly climbing plants will answer very well for your purpose. The majority are evergreen.

EUONYMUS LEAVES COVERED WITH WHITE SPOTS (Lady B.).—Your plants of *Euonymus* are evidently infested with the *Euonymus* mildew, a fungus known to scientists as *Oidium Euonymi japonicae*. This disease is very prevalent in the South of England and in some parts of Southern Europe. When a few leaves only are affected, it is a good plan to remove and burn the infested shoots. When, however, the trouble is deeply rooted, the plants should be cut well back, taking care to burn the prunings immediately, and they should then be dusted over with flowers of sulphur when the leaves are moist with dew. The dusting may be necessary on two or three occasions. The plants may also be sponged with Bordeaux mixture during the spring, or at the time when the young leaves are emerging from the bud stage. This will have the effect of killing the resting spores which have been dormant during the winter.

PLANTING SHRUBS (Bicknoller).—If you have room, you would do better to form a shrubbery to block out the adjoining garden, rather than plant a hedge for the purpose. Such shrubs as *Lilacs*, *Viburnum Opulus* sterile, *Philadelphus coronarius*, *P. grandiflora*, *Berberis stenophylla*, *B. Darwinii*, *Hollies*, *Pyrus floribunda* and *Deutzia crenata*, with a few standard flowering trees, such as *Double Scarlet Thorn*, *Pyrus spectabilis*, *Laburnum alpinum*, *Prunus Avium flore pleno* and *P. serrulata*, would grow up quickly and provide an effective screen. If, however, a fence is necessary, you can do as you say, build one of split Pine poles, then cover it with *Escallonia langleyensis*. This plant will eventually cover a fence 8 feet high, and will provide as dense a hedge as you desire. Moreover, it blossoms freely during the summer. It would be more satisfactory to cover the fence with one plant rather than with a variety, as you would then obtain a more uniform screen. The quickest-growing hedge you could plant would be common Oval-leaved Privet, but it is a most uninteresting shrub, and you would doubtless tire of it in a short time.

THE GREENHOUSE.

PLANTS FOR WINDOW CASE (Gerard).—If the weather is very severe, it will be a good plan to protect your case with a covering of some kind; if of a woolly texture, so much the better. This, of course, will only be necessary in the event of severe frost. Provided you have ample means of ventilation, the various summer-flowering subjects may well be grown in such a structure. *Petunias* would do well therein, and also *Fuchsias*, while perhaps the most desirable things of all for the purpose would be tuberous-rooted *Begonias*.

TREATMENT OF HYDRANGEAS, KENTIAS AND CYRTOMIUMS (L.).—We should not advise you to cut back your plants of *Hydrangea* *Mme. Moulière* now, as the prominent terminal buds will contain the future flowers in embryo. Any cutting back required should be done as soon as the flowers are over, and, directly new shoots are pushed out, the plants must be repotted if they require it. When the pots are full of roots, an occasional stimulant will be beneficial. If the cuttings of last spring had been in an ordinary frame, they should have lost their leaves, so we presume that you have kept them rather

warmer. *Hydrangeas* only need to be just protected from the frost. Your *Kentias* and *Cyrtomiums* have very probably been allowed to get too dry, while, on the other hand, the trouble may be owing to an excess of moisture. If the roots are in good condition, an occasional dose of one of the many concentrated plant foods now on the market should restore them to their normal colour.

ROSE GARDEN.

ROSES AND SAWFLY (A Constant Reader).—You may safely apply some manure now, but we should advise you to have this lightly forked beneath the soil. The lime may be scattered about and also worked into the soil. You can spray with the insecticide as usual, but we would advise some applications of nicotine wash or Hellebore wash, as this is the best remedy for the sawfly. Be careful to spray beneath the foliage during April, May and June. This sawfly, which so badly disfigures the foliage of our Roses and is known as Rose slugworm, may readily be overcome if careful and persistent spraying with the washes named is carried out.

FLOWERING PERIOD OF VARIOUS RAMBLERS (Enquirers).—The varieties marked with an asterisk would last in bloom about three weeks, the others from four to five weeks. Those marked "again in autumn" would give a few blooms at that season of the year. June 10—**Alberic Barbier* (again in autumn). June 15—**Euphrosyne*, **Goldfinch*, **René André*, *Trier* (Perpetual). **Paul Transon* (again in autumn), **Tausendschön*, **Tea Rambler* and *Flower of Fairfield* (Perpetual). June 25—**Veilchenblau*, *Aviateur Blériot* and *Juliet* (again in autumn). July 1—**Crimson Rambler*, **Félicité Perpétue*, **Blush Rambler* and **Starlight*. July 10—**American Pillar*. July 20—*Dorothy Perkins* (again in autumn), *White Dorothy* (again in autumn), *Coquina*, *Excelsa* (again in autumn) and *Hiawatha* (again in autumn).

ARCHES OF ROSES TO BLOOM CONTINUOUSLY (E. T. M.).—You could plant an early and a late blooming Rose together. This is often done; for instance, *Carmine Pillar* to bloom early, and *Aimée Vibert* late. If you plant *wichuraiana* Roses, you will find the date of flowering given in some lists. *Jersey Beauty* would flower early, and *Excelsa* late. By keeping the growths of each well reduced, there would be no overcrowding. Certainly you could plant *Wistaria* as you suggest, and the effect would be very pleasing. There are other subjects, such as *Clematises*, *Loniceras*, *Laburnums*, &c., that will all help to make a pergola most interesting; in fact, one may have something nearly always in bloom by judicious selection. *Berberis Darwinii* makes a fine hedge, and it grows freely. *Veronica Traversii* is rather slow. You would find *Osmanthus ilicifolius* a quicker grower than *Holly* and not so expensive. *Rose American Pillar* makes a delightful hedge plant, and it is almost evergreen. By putting down a few posts and wires you would soon have a good 7-feet to 8-feet hedge, or taller if desired.

FRUIT GARDEN.

PEACH TREES (S. R. B.).—Glass protectors to Peach walls should be placed in position before the trees come into bloom (say, the end of this month), and allowed to remain on till the fruit is set and danger of frost is passed.

GRAFTED TREES: APPLE KING OF THE PIPPINS (C. W. B.).—(1) Three scions in each graft would be quite sufficient to leave, selecting those best placed for future growth. (2) Roses potted up in December would be better planted in their quarters about the second week in February.

ABOUT PLANTING VINES (R. W. R.).—It is a pity to take out the variety *Alicante*, as it is one of the best to grow, crops heavily and keeps well generally. If the roots are well fed and the Vines are not overcropped, the berries will not shank. All late varieties should be ripe by October 1 to keep well. If ripened much later, they neither colour well nor ripen. The following are five good varieties to grow, although for general use *Black Hamburg* is not excelled by any other: *Foster's Seedling*, free cropping, easy to manage, keeps well; *Madresfield Court*, heavy cropper, *Muscat flavour*; *Appley Towers*, a grand late sort; *Gros Colman*, large berries and bunches, free cropping, hangs on Vines late; and *Lady Hutt*, a late white, free cropper, sets berries well, strong growing, and keeps until the new year. No white excels the *Muscat of Alexandria*, but it is best grown in a house by itself and given special treatment. Messrs. J. R. Pearson and Sons of Lowdham, Notts, make a speciality of Vines in pots.

MISCELLANEOUS.

GRUBS OF THE SWIFT MOTH (F. M. C.).—The grubs are those of the swift moth, which is a troublesome pest of a large number of plants, devouring any fleshy roots almost indiscriminately. It would be well to turn up any ground near by roughly, so that birds can get at the grubs, for starlings and some other birds are very fond of them. Vaporite or some other soil fumigant may, perhaps, help to drive them away.

LIME AND MANURE (Kent).—No harm should follow the treatment you adopted in liming the new soil and subsequently mixing well-manured earth with it; quite the contrary. Loss of ammonia follows mixing lime and manure before they are put into the earth, but not after, for the soil will absorb any ammonia liberated. Your treatment of the soil appears to have been admirable for the purpose of growing shrubs, and the only addition we can suggest is that of basic slag at the rate of about four ounces to the square yard.

THE GARDEN.

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JANUARY 31, 1914.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

To Our Readers.—We shall be glad if any reader who experiences difficulty in obtaining **THE GARDEN** from newsagents will send us particulars.

Starting Fuchsias.—Plants that have been stored for the winter may now be gone over and pruned, and before placing them in any of the houses, examine them carefully for mealy bug. Where some of the older plants have become unsightly, it is a good plan to cut them back almost to the pot, when they will break and make good furnishing plants.

Flowers Visited by Humming-Birds.—The bright red flowers of *Erythrina Crista-galli* are inverted, the wings are nearly aborted, and the keel forms at its base a honey sac. This curious structure has led to the supposition that the flowers are visited by humming-birds. *Brugmansia Knightii* is another favourite in cultivation with inverted flowers that is said to be visited by humming-birds, but such instances are very uncommon.

A Beautiful Early Crocus.—In some sheltered spots the flowers of the charming *Crocus Sieberi* are already showing, and, given a few sunny days, will soon be fully open, and so reveal the beauty of the orange-coloured stigmata. This colour makes a fine contrast to the soft lilac hue of the petals, which, it must be admitted, are rather easily damaged by bad weather. However, it is a *Crocus* that we would not like to be without, coming as it does in the wake of the *Snowdrops* and *Winter Aconites*.

Improving Lawns.—Tennis lawns and golf putting greens that, from pressure of work, were not top-dressed in the autumn should now receive attention. If moss is present, scarify the ground with a sharp-toothed rake, give a good dressing of ground lime or powdered charcoal, and afterwards apply some sand and sifted soil, distributing it evenly over the surface with a broom or the back of a rake. It will, however, be too early to apply artificial manure; this had better be deferred till March.

The Winter Heliotrope.—*Petasites fragrans*, commonly known as *Winter Heliotrope*, although so often looked upon as a weed, is worthy of more notice than it sometimes receives. The scent is very pronounced, somewhat similar to the well-known *Cherry Pie* (*Heliotropium peruvianum*), and if grown in pots and placed in the greenhouse or sitting-room when in flower, very few plants that we are acquainted with afford so rich a perfume, although perhaps the peculiar Almond-like scent may not be agreeable to all. Although highly valued for the fragrance of its blossoms produced now, at what might be termed a dreary period of the year, precautions should be taken when introducing it into the flower border. A good plan is to enclose the roots in a large flower

pot or pan, and plunge this in the ground, otherwise the roots spread rapidly.

Alterations in the Rock Garden.—Any alterations intended to be made in this department should be accomplished as soon as possible, so that planting may take place before the season is too far advanced. When sharp frost is over, it may be found necessary to reduce some of the stronger-growing plants to make room for choicer subjects, such as hardy *Primulas*, which are not grown so much as one might expect, considering their hardy constitution. They will live through a severe winter, provided they have good drainage. Their habit of raising themselves above the surface of the soil renders it necessary to apply a top-dressing of good soil in the autumn.

The Cilician Winter Aconite.—This plant, *Eranthis cilicicus*, has but little to distinguish it from our older one, *E. hyemalis*, the ordinary *Winter Aconite*. Both flower very early, and both have yellow flowers surrounded with the pretty Elizabethan ruff of green, which increases their beauty so much. The flowers of *E. cilicicus* may be slightly larger and possibly more finely cut, though this serration varies in different lots, and the shade of green may be slightly deeper or more bronzy; but for all garden purposes there is little to choose between the two. A moist soil suits the *Winter Aconite*, and, though common, it is a flower we cannot well dispense with if we wish to have a glint of gold very early in the year.

Help for Aged and Infirm Gardeners.—On another page will be found a report of the annual election of pensioners on the funds of the Gardeners' Royal Benevolent Institution. We take this opportunity of appealing to our readers to subscribe to this admirable charitable Institution, which exists for the purpose of granting pensions to old or infirm gardeners, or the widows of gardeners. It is extremely sad to think that many thoroughly deserving persons cannot be relieved of unmerited distress, owing to the lack of funds. The Institution is conducted by a strong committee, the members of which are held in the highest esteem in the world of gardening, and as all expenses, which are really very low considering the amount of work done, are met by the interest on investments, every penny subscribed is used for actual relief. We therefore hope that our readers, in enjoying the many beautiful flowers in their gardens, will give more than a passing thought to these poor old people, many of whom in the past have contributed their quota of industry in bringing these flowers into being, and who, through no fault of their own, have fallen on evil times. The secretary is Mr. G. Ingram, 92, Victoria Street, Westminster, and he will be pleased to furnish anyone with full particulars concerning the work of the Institution.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Briquettes from Coal-dust.—Is it possible to concoct "home-made" briquettes (for burning on a coal fire, open or closed) from an accumulation of coal-dust? If so, what should be mixed with the coal, and what is the method for making and shaping the briquettes?—Clossy, *Hants.*

Mossy Saxifrages in Winter.—I can fully endorse all that is said about Mossy Saxifrages (issue January 10, page 17) and the dense carpet of vivid green in winter. In frosty weather, however, the contrast with the sombre hue of the surrounding rocks is even greater, as may be judged from the accompanying photograph, taken on January 24 last, when vegetation generally was clothed in a mantle of hoar-frost.—C. Q.

Primula pulverulenta Mrs. R. V. Berkeley.—I am grateful to Dr. Macwatt for having corrected my description of this Primula, which appeared in your issue of January 10, page 22. There can be no doubt that the variety figured is the same as Dr. Macwatt's, for both were obtained from the same source. As for the seeding of this variety, I have since learnt that so far it has not produced seed in this country, although it was originally raised from seed sent home by Messrs. James Veitch and Sons' collector from China.—A. D. M.

The Gold Mohur Tree.—In your issue of January 17 I note that Mr. T. Tillard has answered "G. D.'s" enquiry about the Gold Mohur Tree. Mr. Tillard is right in saying that it is a variety of Poinciana—it is Poinciana regia, of, I think, the Acacia family. It flourishes considerably in Lower Burma and the Straits Settlements. It grows beautifully in Maulmain, Tenasserim, where it was first known by the Burmese as "Yondawbyar," meaning "The Coming Back from Court Flower," as a tree had been planted near the Court House, and the young clerks used to stick a flower of it in their hair and take it home to their sweethearts or wives.—BURMA.

A Fine Plant of Euphorbia jacquiniæflora.—Some time back, when looking round an old garden in this North London district, I made note of a very good specimen of the above plant, which was growing in a border of a warm greenhouse. I was unable to gather any actual data as to its age, but it had evidently been there a good number of years. It was about three feet in height and rather more in width, while some of the stems were of considerable thickness, which fact would strengthen the idea of age. It has not been my good fortune to grow or see grown such an excellent plant as the foregoing. The usual practice, as is well known to plantmen, is to grow them in pots either singly or in threes, and, however well

done, the occasions are rare, I venture to affirm, when they approach anywhere near the above dimensions. Apparently the border method of growing this Euphorbia is most satisfactory, at least where large plants are valued, together with the possibility of their living several years. After once the cuttings are struck (a difficult matter at times), I do not think the secret of doing this plant well rests with the tremendous heat, as some growers advise, but rather with a well-drained and warm rooting medium and more air than is usually given.—C. T., *Highgate, N.*

Late-Flowering Roses.—The Rev. David R. Williamson writes us from Kirkmaiden Manse on January 24: "It may interest your Rose-

have only to add that Viscountess Folkestone, one of the most fragrant and fascinating of all Roses, and the beautiful Bouquet d'Or are also flowering still."

— So much has been written about late-blooming Roses that it may seem ridiculous to mention that on January 9, when visiting the nurseries of Messrs. Allwood Brothers, near Hayward's Heath, I found a batch of Roses in their garden blooming quite freely. Several hundred bushes in the open nursery were practically bare of leaf, but in the garden, sheltered by a tall hedge, the bushes were full of foliage, while really fine flowers of Richmond, Lady Ursula, Mrs. W. Christie Miller and many others were to be seen on every hand. On pointing out the value of all flowers at the present time, one of the men was told to cut the blooms, for many of the Richmonds were equal to those making 5s. per dozen in the market.—T. A. W.

Ranunculus Matthewsii and Varieties.—Readers of THE GARDEN, and especially lovers of rare alpine, owe a debt of gratitude to Mr. W. Wilcox of New Zealand for the photograph of that little-known plant R. Matthewsii, an illustration of which appeared on page 2 in the issue of January 3, and for bringing to the notice of the flower-loving public one of the finest sub-alpines of the Antipodes. To let his note and illustration pass unnoticed not only damps the ardour of the warmest enthusiast, but discourages him from sending further notes which might prove helpful and interesting. Writing in answer to a note of mine which appeared in THE GARDEN about three years ago, your esteemed correspondent "S. A." thought the species difficult to cultivate and establish in this country. But at the great International Show, 1912, Messrs. Backhouse of York seemed to have dominated those difficulties. As reported in THE GARDEN, May 25, 1912, page 256, we read that this enterprising firm had exhibited in their rock garden "the rarely



A WINTER SCENE IN THE ROCK GARDEN. MOSSY SAXIFRAGES COVERED WITH HOAR-FROST.

loving readers to learn that I have had several highly attractive varieties in flower in my garden within the past week. Among these were an abnormally tall plant of Margaret Dickson, which, after climbing through an exceptionally high Hawthorn hedge for fully five years, now blooms at least three times in the year at a height of not less than 21 feet. Another specimen of the same heroic and highly attractive Hybrid Perpetual (which should rather be regarded as a Hybrid Tea, as Lady Mary Fitzwilliam has imparted to it many of her best attributes), which is also at present in flower, overtops an Apple tree in the centre of the garden at an almost equally proud elevation. Its world-renowned raiser, Mr. Alexander Dickson of Newtownards, is naturally much gratified by its achievements in my garden. I

seen Ranunculus Lyalli (of which Matthewsii is a variety), with its handsome flowers of glistening white above the setting of glossy peltate leaves. This is perhaps one of the rarest plants in the exhibition, one to look for and admire." In THE GARDEN for July 30, 1910, an excellent illustration is given of R. Lyalli, from a photograph sent by a New Zealand reader, Mrs. Izard of Whanaka, which gives a good idea of the beauty of this plant growing in its native habitat. Mr. Wilcox informs me that he has still another rare thing in store, and is looking forward to it flowering this year. This is R. Lyalli variety Traversii, which he collected four years ago.—J. E. DAVIES, *The Gardens, Talygarn, Pontyclun, Glamorganshire.*



A NEW SCABIOUS:

Scabiosa caucasica magnifica.

Eceremocarpus scaber.—How is it that this handsome climbing plant is to a great extent neglected? True, it is not, strictly speaking, hardy, but one sometimes finds plants of this so-called half-hardy perennial which have become thoroughly established and produce an annual display of their trumpet-shaped, orange flowers. The writer last autumn saw a splendid example of this plant in Essex. This particular specimen receives no protection during the winter, and has been growing for several years in its present position. Plants can be raised from seed, but if sown in the ordinary way, viz., covered over with soil, the results are anything but satisfactory. Seed which falls to the ground will often germinate freely. This fact gives one the correct method to adopt when sowing. Seed sown in shallow trays containing a thin layer of moist soil and not covered will almost invariably germinate. The trays may be placed in a frame or cold house and given a shady position. Do not allow the soil to become dry.—C. R., *Saffron Walden*.

A Good Plant for a North or East Wall.—White-flowering plants suitable for planting against walls having a north or eastern aspect are not too plentiful. There are several species of Clematis which thrive in these positions, also Spiræas. The subject of this note, *Deutzia crenata*, or, as it is sometimes called, *D. scabra*, is not so often seen as it should be. Although often met with in shrubberies, where it is frequently a sadly neglected plant, its qualities as a climber are not fully appreciated. The principal reason is that the proper method of pruning is seldom followed. This is one of the many *Deutzias* which require severe pruning immediately after flowering. The flowers are produced on the young shoots of the previous season's growth, and the stronger these shoots are, the better the flowers. Young growths 5 feet or 6 feet in length are produced by this treatment. These should be secured to the wall about eight inches apart. A good loamy soil suits the plant, and moisture is essential during the season of growth.—COLIN RUSE, *Sulhamstead*.

A New Race of Winter or Early Flowering Sweet Peas.—More than eighteen months ago I was told by Mr. Arthur Yates of Sydney, Australia, that a very precocious sport had recently appeared there among some ordinary Spencers. The seed had been saved, and a wonderfully early flowering strain had resulted. This is known in Australia as the Yarrowa Spencer, and has been a decided acquisition in such warm climates as that of Sydney, for if seed be sown in late summer or early autumn, the plants will begin to bloom in two months from the time of sowing, and continue in flower for some two or three months longer; in fact, until the hot weather begins. This strain has now been crossed with the older winter-flowering varieties, with the result that a large and vigorous race has been obtained, which is further distinguished by well-formed blooms of much substance. The name "Concord Hybrids" has been given to it, and it is said by the raiser to be superior to the Algerian one of Arkwright, the American of Zvolanek, or the British of Engelmann. I am going to try these Australian seeds this spring, and I hope to send an account of them later on in the year. It seems to me that a public trial of these various early flowering strains that are now before the public would be most useful. Why should not the Royal Horticultural Society be asked to find room for a small representative collection of each of them, and grow some in pots under glass and some in the open? I find these

early Sweet Peas so very useful, and I would like to know which is the best.—JOSEPH JACOB.

Ceanothus Gloire de Versailles as a Pot Plant.—Having given this shrub a trial as a pot plant, I have been agreeably surprised to find how readily it responds to such treatment. One is so accustomed to see it making a glorious display on a wall, herbaceous border, or in a shrubbery, that it is rather difficult to picture so much at home in a pot. To those, however, who have not grown it in this way I would suggest doing so, for the result will afford ample compensation. A strong point in favour of this treatment is the advantage of being able to hasten or retard the flowering period. Quite nice bushy plants may be obtained in 6-inch or 7-inch pots. While any kind of forcing should be avoided, the *Ceanothus* may safely be placed in a warm greenhouse to hasten its growth a little in early spring, a light, airy position being chosen. In order to be retarded, the plants should be plunged in a bed of ashes under a north wall, and pruning delayed as long as possible. After the flowering period an outside position in full sunlight ripens the wood and ensures another successful display the following season. The plants should be wintered outside, with the pots plunged to protect them from frost. When pruned, the young wood should be cut hard back to one or two good "eyes."—H. TURNER, *Serlby Gardens, Bawtry*.

An Interesting Shrub.—Though by no means a brightly coloured flowering shrub, the Bladder Senna (*Colutea arborescens*) has its own particular beauty, which is quite sufficient to justify its inclusion in even a limited collection of shrubs. The *Coluteas* belong to the Order Leguminosæ, and are easily grown shrubs, thriving in poor soil and in exposed situations. *C. arborescens* is said to be one of the few plants that grow on or near the crater of Mount Vesuvius. The flowers are borne in great profusion in short sprays, and are yellow in colour. These are followed by the seeds, which invariably set with great freedom, and are contained in highly inflated pods. These latter are the chief attraction, and a good-sized shrub covered with these peculiar-looking pods always attracts attention. There is a variety, *media*, which is even more prolific than *arborescens* and not quite so large in the size of the bush. The colour of the flowers is also different, being more of an orange shade. This variety was very fine last autumn in Mr. Brough's interesting garden at Ochilview, near Perth, where it was greatly admired by numerous visitors. Among the many choice shrubs grown there it was the outstanding feature during August and September. *Coluteas* are easily increased either by seeds or cuttings, the latter taken off with a heel and inserted in sandy soil in autumn either in a cold frame or in a sheltered corner outside.—W. L., *South Ayrshire*.

FORTHCOMING EVENTS.

February 2.—National Chrysanthemum Society's Annual General Meeting.

February 3.—Scottish Horticultural Association's Meeting.

February 5.—Linnean Society's Meeting.

February 6.—Royal Gardeners' Orphan Fund Annual Meeting at Simpson's, Strand, at 5 p.m.

February 7.—Royal Scottish Arboricultural Society's Annual Meeting. Société Française d'Horticulture de Londres Meeting.

February 9.—United Horticultural Benefit and Provident Society's Committee Meeting.

ROSE-GROWING IN TOWN GARDENS.

HYBRID PERPETUALS, although among the hardiest Roses, are by no means best for town gardens. For the most part they are more fastidious as regards soil than the Hybrid Teas, and are only really satisfactory where the staple is of a heavy nature. All are more or less addicted to mildew, and, speaking generally, they are strong growers which do not give results in proportion to the space they occupy. However, we must still look to the Hybrid Perpetuals for some of the best dark reds, and although they are mostly inferior to the Hybrid Teas in regard to shape and freedom of flowering, almost all are very sweetly scented.

The Best Hybrid Perpetuals.—The two that no Rose-grower can afford to be without are Frau Karl Druschki and Hugh Dickson. Both are known and grown everywhere, and there can be hardly a Rose garden in which they find no place. If the garden be very small—and unfortunately there are many such in towns—it is best to limit the choice in Hybrid Perpetuals to these two varieties, relying on the Hybrid Teas for the rest. In this case they can be grown as standards on the lawn, for which both are eminently suitable, and they will make good companion trees. The red and white form a very effective contrast, and this arrangement has the advantage of separating them from the Hybrid Tea and Tea Roses. Both are rather difficult to accommodate as dwarfs, on account of their unwillingness to behave as such. Frau Karl Druschki has an especially awkward habit of breaking with tremendous vigour from the topmost eye, which must be fully taken into consideration at pruning-time, or plants become unshapely. Both are suitable for pegging down.

Those with sufficient room to devote one or more beds to this section will find a number do quite well in towns where the soil is suitable. Ulrich Brunner is a fine, sturdy grower, free-flowering and very sweetly scented, though not always satisfactory in the quality of the blooms it gives, and its very light green foliage seems to have an extra attraction for all insect pests. Mrs. John Laing is another fragrant and good all-round variety, though it seems hardly necessary to go to the Hybrid Perpetuals for pink Roses. Gloire de Chedane Guinoisseau is a promising variety of fine shape and colour that seems likely to become a recognised town Rose. Captain Hayward is a fine Rose of a dazzling shade and free-flowering, but not good in a hot season, and even more insistent than most Hybrid Perpetuals in demanding a clay soil. Those who would have dark crimson kinds should include in their selection Fisher Holmes, Charles Lefebvre and Commandant Felix Faure. In the case of many of the old Hybrid Perpetuals, half a century or more of artificial propagation seems to have robbed them of some of their original characteristics. Of Prince Camille de Rohan, what is practically a non-flowering strain seems to be pretty widely distributed. Marie Baumann is another which seems to have deteriorated, and many nurserymen are giving it up. Margaret Dickson and Mrs. Sharman Crawford should not be grown in town gardens, both being too prone to mildew, while Horace Vernet is of little use except on the maiden plants.

Rambling Roses and their use in town gardens will be dealt with on February 14. P. L. GODDARD.

IN A HAMPSHIRE GARDEN.

SOME OF THE NEWER POMPONS (POLYANTHAS).

FROM climbers and semi-climbers one passes to the other extreme, namely, the Pompon or Miniature Roses; and one would like to emphasise the fact that a very great deal of pleasure is missed by the Rose-grower who omits to have a fair selection of these delightful Roses in his garden. One of the first as a class to flower—by reason of the fact that no pruning is required, only a removal of the flower-stems of the previous season; these carry no dormant buds, but are bare of all possibility of further growth—they go on flowering, so much so that if a Rose is ever to be found on a plant in every month in the twelve, it is on these Pompons that I should expect to find it. At the present time (January 20) Mme. E. A. Nolté, one of the stronger-growing varieties, is carrying flowers and buds in profusion, and that same bush had flowers on it in April last year, so that is ten months out of the twelve. Some of them, of course, drop their foliage, and with the foliage goes the flower; but others seem to retain it until the new growth literally pushes off the old. There have been quite a number of additions to this class during recent years, but I have not attempted to keep pace with them in my own garden, only getting the best of those I have seen growing elsewhere. Among those I have seen in this way are the following:

Backfisch (Peter Lambert, 1910).—This is rather a cruel sort of name for a pretty Rose; pink blossom, not very large, but of distinctly good shape. No doubt there is a reason for the label, but these things ought to be translated for us. The plant is free-flowering.

Cyclope (Dubreuil, 1910).—This was described as an improved Jessie; but I prefer Jessie. It is a dark crimson, with a distinct white stripe, and is possibly as free-flowering.

Daphne (Rev. J. H. Pemberton, 1913).—This is, I see, classed with the Pompons, but is really a Hybrid Musk, one of those Roses possibly that it was hoped would climb; but it has refused to do so. At any rate, it is perpetual flowering, and is vigorous for this class. Semi-double, pretty rose pink flowers, fading to flesh.

Erna Teschendorff (Teschendorff, 1911).—Another "improved Jessie," and this time with possibly somewhat more title to that distinction. It is a good dark crimson that does not fade; said to be a sport from Mme. Norbert Levavasseur. Let us hope it will never revert back to its parent. What an appalling colour Mme. Norbert Levavasseur can be, and generally is!

Ellen Poulsen (Poulsen, 1912).—A good deep pink, nicely scented. All these Roses are free-flowering and perpetual, so I shall leave out these two remarks in dealing with the remainder. The flowers are rather larger than the usual run of Pompons.

George Elger (E. Turbat and Co., 1912).—This is quite one of the best of these new introductions:

a good bright, clear yellow, deeper, of course, in the bud. Flowers medium size, and making a nice-shaped plant.

Jenny Soupert (Soupert et Notting, 1912).—This is a good-shaped white, flushed pink in the early stages. Nice large clusters of flowers; likely to be useful.

Jessie (Merryweather, 1909).—This well-known Pompon is only mentioned here to draw attention to the fact that it makes a really excellent half-

Orleans Rose (Levavasseur, 1910).—A deeper coloured Mrs. Cutbush, and by some said to be preferred of the two, as it is, if anything, the freer flowering, especially in the autumn. It flowered here right up to Christmas. It is quite good.

Pompon de Lyon (Dubreuil, 1913).—Another deep pink, but distinct enough. Not so strong a grower as some. One would call it medium for this class; that is, about 12 inches or 15 inches.

Queen of the Musks (Paul and Son, 1912).—This is a delightful Rose; Hybrid Musk I suppose we should call it. Very free, and making an excellent bedding Rose. Flesh white flowers, with deeper-coloured buds. Recommended.

Yvonne Rabier (E. Turbat and Co., 1911).—The companion to Maman Turbat at the Chelsea International Exhibition. This is a fine white; flowers large and produced in beautiful panicles. A most effective bedding Rose. Recommended.

Six good varieties of the older sorts in distinct colours would be found in the following: Leonie Lamesch (very tall), Mme. E. A. Nolté, Philippine Lambert, Perle d'Or, Cecile Brunner and Eugénie Lamesch (very dwarf).

Southampton. HERBERT E. MOLYNEUX.



FRASERA SPECIOSA, A LITTLE-KNOWN PLANT WITH CREAMY-WHITE FLOWERS.

standard, and, so used, has a quaint effect as isolated or dot plants.

Maman Turbat (E. Turbat and Co., 1911).—First seen at the Chelsea International Exhibition, where it was much admired. As seen out of doors, it is even finer. It makes fine growth, and produces its flowers in very large trusses. Colour, pleasing China Rose. Recommended.

CANKER IN FRUIT TREES.

[In Answer to a Correspondent.]

OF all the troubles of fruit-growers, canker is one of the most general and the most easily recognised. Most of us are too familiar with the large, unsightly gaps it makes in the bark of Apple trees, gradually spreading round the branch until it has completely girdled it and the branch dies. Canker has been attributed to a very large number of causes, and there are undoubtedly several different forms on Apples in various parts of the world, and probably more than one in this country, but the commonest is that associated with the fungus *Nectria ditissima*, the bright red fruits of which are being produced now on canker spots on the affected trees. Like many other disease-producing fungi, this can only attack trees through open wounds. The spores applied to the healthy, unwounded bark have no power of penetrating it; but should they, in early spring or in summer, when the spores are liberated in myriads, be carried by wind or insects on to an open wound, they will germinate, and in all probability make their way into the cambium and quickly destroy it. Thenceforth there is a constant struggle between the affected

plant and the fungus for supremacy. The plant during its more active periods will strive, by making a wound-healing callus, to cover up the wound, and may, if it be in thoroughly good health, succeed in doing so and in getting the better of the fungus; but generally, as soon as growth is checked by seasonal changes, the fungus grows ahead and destroys the tissues newly made. This kind of thing will go on year after year,

sometimes for many years if the diseased branch be a large one, the wound in the bark becoming more and more open, and allowing bacteria and so on to reach and cause the decay of the wood.

One of the first effects of the attack—the destruction of the bark over some considerable area—causes the flow of food made in the foliage down the stem to be interfered with. A greater quantity of food is thus kept in the stem above the wound, and, at the same time, there is a lessening of the water sent up the wood, since the death of the cambium has caused a cessation in its formation. This increase of stored food and decrease in water supply has the usual result of increasing fruitfulness, though the fruits produced will probably remain small. The last state quickly comes, however, growth gradually or rapidly ceases, and death supervenes.

Two things, thus, are necessary for the spread of the disease—the fungus, and the wound by which it may enter. It is impossible to exterminate the fungus, for, although great care would destroy it in orchards, there still remain Crab Apples, and, in addition, several other native trees are liable to attack. Wounds difficult to heal can be avoided to a large extent, however, by taking care that all cuts made are clean and large ones; after smoothing over with a knife, protect by painting with lead paint or tar (not smearing with earth, as is so often done). Wounds made by insects, frost cracks, dead shoots breaking off, careless climbing about in trees, gunshots, and the like are also a menace. Of insects, none is worse than the woolly aphis or American blight. The soft tissue produced as a result of its attack is very liable to act as a nursery for the fungus while it is young, and from this spot it spreads and does serious damage. Frost cracks and dead shoots resulting from frost in spring are always more common in wet and low-lying localities than in places where there is a free circulation of air and thorough soil drainage. The bottom of a valley is one of the worst spots for late frosts as a rule; higher up the slope the trees are far less liable to suffer. These frost wounds are mostly at the base of a bud, or in the angle between stem and branch. The other causes of wounds can be avoided with care, and, where they occur, every care should be taken to protect the wounds made.

Certain varieties are more subject to canker than others, probably because they are more liable to wounding. Ribston Pippin, Cox's Orange Pippin, and Wellington (or Dumelow's Seedling) are notoriously liable to canker, and where heavy soil or places liable to sharp late frosts have to be dealt with, it is wiser to select the hardiest varieties of Apple.

Cutting out and burning the diseased patches is the only method of dealing with the disease when once the tree is attacked, and, at the same time, care should be taken to paint over wounds thus made. The knife used should be dipped in carbolic acid or in methylated spirit after each cut is made.

It should be remembered that the bright red fruits already referred to are not the only source of infection. The fungus produces another type

of spore by which it is spread, this time taking the form of whitish patches on the canker spots and occurring during the warmer parts of the year, so that immediate attention to any wound is best.

SCIENTIST.

FRASERA SPECIOSA.

THE little-known genus *Frasera* contains about seven species of North-West American hardy perennials belonging to the Natural Order Gentianaceæ. One of the most showy species is *F. speciosa*, which sends up a straight and strong flower-spike from 3 feet to 4 feet in height. The general appearance of this plant resembles that of a *Veratrum* or False Hellebore, which, however, belongs to quite another Natural Order, viz., Liliaceæ. The flowers of *F. speciosa* are creamy white, and are borne in June and July. It thrives in a fairly moist situation, and forms a suitable subject for planting in a low bay in the rock garden.

plantation—this Saxifrage grows in such abundance that its deep green leaves and rosy purple (ranging to pale pink) flowers can be seen from a considerable distance. It seems hardly credible that the plant could find sufficient nourishment in such a waste of stone to thrive so luxuriantly; but no doubt the constant decay of the older leaves provides some amount of humus, and the patches of growth are sure to arrest any finer particles which may come down the mountain-side.

REGINALD A. MALBY.

ORCHID NOTES.

THE CALANTHES.

THESE are terrestrial Orchids which may be divided into two sections—the evergreen and deciduous—and it is with the latter that I shall deal. They are very popular plants, and are largely grown in gardens where there is no



SAXIFRAGA OPPOSITIFOLIA GROWING AMONG STONES ON A MOUNTAIN SIDE.

The genus *Frasera* is named after John Fraser (1750–1811), a collector of North American plants.

SAXIFRAGA OPPOSITIFOLIA IN ITS NATIVE HABITAT.

THIS Saxifrage, a large scale illustration of which appeared in THE GARDEN of November 30, 1912, has its principal habitat among the rugged rock-falls of the higher passes, where its minute growths make vast cascades of verdure, mantling the rocky ground. The accompanying illustration shows forcibly the kind of position in which it makes its home. Here, forming an enormous buttress against the steep western face of the Schwarzhorn, in the Valais, lie the shattered remnants of that portion of the mountain upon which the elements have made such an onslaught. Many of these blocks, which lie about in all directions, weigh several tons, and in the interstices of these huge lumps—probably where some small amount of wind-blown detritus had accumulated to start the

attempt made to cultivate other Orchids. This can be easily understood when we take into consideration their free-flowering qualities, and the fact that the long spikes are produced from December till March.

Repotting.—After the flower-stems are removed, the pseudo-bulbs take a short rest in a temperature of 50° to 55° Fahr., and when growth and root action commence, the repotting must be done. Some growers place one bulb in a pot, but where the bulbs are plentiful several may be included, so that a nice specimen that will come in very useful for decoration in the dwelling-house is secured. The largest bulbs may be planted singly in 5-inch pots, and about four of the smaller ones in a 7-inch or 8-inch pan. Each receptacle should have one-fourth of its depth filled with drainage, over which is laid a thin layer of fibrous loam. If not already done, the bulbs must have all the old soil shaken away, and the roots cut back to an inch or so of their base, the object being to leave a little tuft

to keep the bulbs firm in the fresh compost. This consists of the best fibrous loam one-half, peat one-fourth, the other part being made up of sphagnum moss, small crocks or charcoal, and a little manure from the old spent Mushroom-bed or a sprinkling of bone-meal. The whole should be broken up into pieces about the size of a Walnut, and when thoroughly mixed it will be ready for use. Press the soil fairly firm, and when the operation is completed, the surface ought to be just below the rim, as *Calanthes* enjoy plenty of water when thoroughly established.

Subsequent Treatment.—A light position in the plant stove, Cucumber-house or warm Orchid-house should be selected, and water ought not to be given frequently until the roots take possession of the compost. As growth advances and the new bulb forms, they must never be dry at the base till after the flowering period. A moist atmosphere must be maintained, and a little top and bottom

kind is required, *Regnieri* should be chosen; it blooms at a time when all fear of fog is passed.

T. W. BRISCOE

TWO INTERESTING SHRUBS.

THE WINTER SWEET.

(*CHIMONANTHUS FRAGRANS*.)

IT is no small wonder that the fragrant flowers of the Winter Sweet are so much appreciated, for they are borne in the depth of winter, however bleak and cold it may be. Moreover, the sprays are so useful for cutting, the flowers lasting for weeks in a room and yielding their precious fragrance the whole time. This shrub was introduced from Japan nearly a century and a-half ago, and it is bound to remain

at home on a wall of any aspect, at least in Southern gardens. A deep, rich sandy soil suits it best, and it should be kept trained neatly to the wall or building against which it is planted.

A BEAUTIFUL ROCK ROSE.

CISTUS CORBARIENSIS

ALTHOUGH not often cultivated, this is unquestionably one of the most delightful of all the Rock Roses. In June it is literally smothered with small white, satin-like flowers that resemble single Roses. It is of low-spreading habit, not exceeding 2 feet in height. Like other Rock Roses, it is well adapted for a warm bank or a sunny position in the rock garden, and it seems to show preference for a stony soil. *C. corbariensis* is sometimes regarded as a variety of *C. salvifolius*, but it is probably a hybrid between that species and *C. populifolius*.

In very hard winters it is not unusual for some of the Rock Roses to be severely damaged, or even killed outright, by frost. This, however, may be guarded against by covering up the compact shrubs either with dry litter or mats. One of the hardiest species is *C. laurifolius*, which does quite well even in Scottish gardens, while *C. purpureus* and *C. ladaniferus* are two other beautiful species that as a rule withstand frosts satisfactorily. Like the Sun Roses (*Helianthemums*), to which they are related, the Rock Roses are delightful subjects for growing on sunny banks or in positions facing south in the rock garden.



CISTUS CORBARIENSIS, A BEAUTIFUL ROCK ROSE SUITABLE FOR CLOTHING A WARM BANK.

THE CAUCASIAN SCABIOUS AND ITS VARIETIES.

COLOURED PLATE 1486.

IF I were asked to give the names of a dozen first-class herbaceous plants, I should certainly include the Caucasian Scabious, despite the knowledge that there are those who, gardening with hardy plants alone, say they are unable to cultivate it. That condition of things is, I fear, due to the belief that it is only necessary to plant it in ordinary

ventilation be given during hot weather. *Calanthes* do not require so much shade as the majority of Orchids, but some slight protection from the strong rays of the sun is necessary during the hottest part of the year. When the bulbs are near completion, the foliage will begin to decay at the tips, and the spikes appear near the bottom of the pseudo-bulb. To keep the plants tidy, the leaves may be trimmed with a pair of scissors, but this is not necessary, only for the sake of appearance.

The Best *Calanthes*.—Hybrids play an important part, and the most popular of all is the rosy pink *C. Veitchii*. Then we have the pure white *Harrisii*, *Oakwood Ruby*, *Baron Schröder* and others, while the principal species are *rubens*, *rosea*, and *vestita* with its numerous varieties, the best being *luteo-oculata*, *Regnieri*, *rubro-oculata* and *Turneri*. Where a late-flowering

a favourite, for those who have once had it in their gardens look for the fragrant flowers in midwinter as eagerly as others look for the opening of the first Snowdrop in spring. Occasionally one hears of complaints about the paucity of flowers. This may be due to very youthful plants or improper pruning. Obviously it would be a mistake to prune in autumn, for this would mean the removal of flowering wood. The correct time to prune is after flowering, and just as the young leaves are about to develop. The flowering wood may then be cut away, or at least very much reduced, to make room for new growth, the flowers being borne on the wood made the previous season.

The variety *grandiflora* is an improvement on the species, the flowers being larger and more open, but it is scarcely as hardy. It does well on a south or west wall, whereas the species appears quite

garden soils and expect the finest results. That is a mistake at the outset. As a matter of fact, this particular species would appear to abhor heavy retentive soils, though quite at home in some of the stronger loams where these are of a sandy nature and well drained. At the same time, an even greater measure of success follows its cultivation in light and warm soils, and it offers no objection to those largely composed of vegetable matter, or others of a peaty nature. In a word, therefore, the plant may be said to flourish in light, well-drained soils in preference to all others. If such as these are at planting-time enriched by the addition of a good layer of cow-manure a few inches below the base of the plants, so much the better.

In such circumstances the seedling plant will make fine tufts in the course of a season, and in turn yield in the following year a rich harvest

of flowers of which any hardy plant grower would feel justly proud. In point of colour beauty and refinement the Caucasian Scabious is one of the indispensables, one that no good garden should be without; hence it is suggested that the soil be made to suit the plant. The delicate lavender blue of its flowers is quite a rarity in the garden at any season, and few are more highly prized in the cut state. The florist-decorator thinks well of it, and it is alike as valuable to the exhibitor of hardy flowers as for the decoration of the border at home. So much, then, in justification of my opening statement, and a plant possessing the good attributes named merits not merely good cultivation, but specialisation, should occasion

Raising from Seeds.—Apart from the important question of soil, that of raising the plant periodically from seeds merits close attention, for more than one reason. On light and warm soils this handsome Scabious is usually a good perennial. On heavy soils it is not so. Then, again, because of its abundant and profuse flowering, the stools become exhausted; hence the need for replacing them with others of a more youthful and vigorous nature. Happily, seeds are abundant and cheap, and, vegetating quickly and with comparative certainty, afford the readiest means of propagation to amateur and professional alike. The seeds should be sown preferably during the autumn or winter months, so that, vegetating in the earliest days of spring, there is still a full season ahead for the plants to make good growth. These would be best in a cold frame. Seeds sown in February or later should be given greenhouse treatment, a temperature of about 50° being ample. In either case the seedlings should be potted off singly when large enough to handle and grown without a check from the start, so as to be ready for their permanent quarters in the open ground early in May.

Varieties.—Though variations naturally occur when raising plants from seeds, the species has not been prolific of good or distinct forms, though such names as *superba*, *atrocærulea*, *perfecta* and others have been catalogued. A good white variety received an award of merit so long ago as 1895, an honour never granted to the typical kind. The white is not pure, however, and there is abundant room for another of more glistening purity. The most recent addition—it is an acquisition as well as a novelty—is that depicted in the coloured plate presented with this issue. This originated with Messrs. James Cocker and Sons, Aberdeen, and when exhibited by them in August last as *Scabiosa caucasica magnifica* (Cocker's Variety) gained an award of merit from the Royal Horticultural Society. It is the finest I have seen, the flowers larger and of a

deeper lavender blue than the original. The stock at present is limited, and as in common with such plants the seedlings do not come absolutely true, propagation has to be effected by division—a rather slow method.

E. H. JENKINS.

THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

Arrangement of Plants.—I wonder if there ever has been a border so perfectly arranged as to give complete satisfaction! The spotty

perfection, it is best to assure ourselves that in the production of herbaceous borders it is a thing unattainable. Were we to hit on an arrangement perfect in every respect, there are so many vicissitudes in front, from the young gardener's clumsy boot to the changeableness of our climate, that we can never hope to travel an undeviating road to success. Personally, I do not like any of the styles here noted. Nor do I care to stereotype any arrangement, but, on the contrary, like to vary the planting and, to some extent, the plants every year. It is true that the same flowers never tire the lover of flowers; but fashion must be consulted, and fashion is largely a gradation of changes. At the same time, I deprecate copying the planting of herbaceous borders, so largely the custom of to-day. No one can have a fresh garden whose schemes are the outcome of what has already been produced in other gardens, and it is to be preferred to retain the individuality of one's own garden, though at the expense of perhaps a short-lived brilliance, rather than have it a bad second to another. The person who thinks out schemes for himself is the one who sooner or later will be among the copied.

In Even a Narrow Border it is not essential to have comparative uniformity of height and evenness of slope. In a wide border it is important that these should not occur. Not only should the best plants be selected, but they should also be arranged so as to provide the best effects they are capable of giving. Thus we would mass certain plants, *e.g.*, *Rudbeckia speciosa*, *Phloxes*, *Eupatorium Fraseri*, *Pentstemon Southgate Gem* and others, *Polygonum affine* and certain of the *Asters*. Some we would mass and also employ singly or in close clumps. Such are *Hollyhocks*, *Liliums tigrinum*, *candidum*, *Martagon*, &c., *Gladioli*, *Aconitum autumnale*, *A. Wilsonii*, *Montbretias* and *Anemone japonica*, and there are a number which perhaps always should be graded singly—*Agapanthus umbellatus*, *Statice latifolia*, *Eryngiums* generally, *Francoa ramosa*, *Astilbes* and *Delphiniums*. Very important, too, are the parts of the border to which the various plants are



A SPRAY OF THE WINTER SWEET (*CHIMONANTHUS FRAGRANS GRANDIFLORA*), A HARDY SHRUB THAT FLOWERS IN MIDWINTER.

border, consisting of single plants disposed according to relative heights and colour; the triplet border, in which all, or nearly all, of the plants are arranged in threes; the chess border, with its divisions severely four-sided, with one kind of plant in each division; and the higgledy-piggledy one so prominent in published schemes of planting, with its impossible corners protruding into other equally impossible divisions, the prevailing objective being a striking dissimilarity of form and filled with plants as dissimilar as possible. Each and every one of these has its faults. And, really, though we may struggle to attain

apportioned. A handsome-habited plant should never, or hardly ever, be put where any part of it is hidden by another and less attractive plant. Hence in the front of the border should be found *Liliums*, *Carnations*, *Agapanthus* and such like *Hollyhocks*, as a rule, look best against a background, but care must be taken that the plants in front are not so tall as to obscure the charm of their individuality. *Galtonia candicans* is usually best placed behind plants tall enough to cover the foliage, which towards autumn becomes unsightly, the spikes only being seen. To me it is a serious drawback to gloriously coloured

arrangements that this important feature of form is so little, if at all, considered, the mere general height of plants being enough to decide what part of the border they shall occupy. Those who may cherish fears as to the general effect of a border not by any means homogeneous in height may dismiss them, because a border fairly apportioned with tall plants towards the back gives quite as good an effect, even though broken in several places by dwarfier plants, as one in which a similarity of height is maintained throughout. And that border affords great scope for particular effects. Thus there may be a bold mass of Hollyhocks well to the back, on one side supported with tall plants, while, on the other, groupings of low-growing plants from front to back afford a clear view of these stately flowers, and there is the added interest of variety in height and form to the good. The advantage of

A Wide Border is chiefly on account of the variety in arrangement of this kind, of which there is practically no end, because, reverting to the above instance, there may be an assortment of plants of various height, such as Campanula

decline to break away from hard lines and equi-distances, and every new hand has to be carefully broken in before the slightly natural way of arranging is acquired. It is usually along the front edge that the outcome of the mathematically minded planter is most evidenced, though the varying by a few inches makes all the difference. Another evil to be avoided in planting is the setting of front plants too far

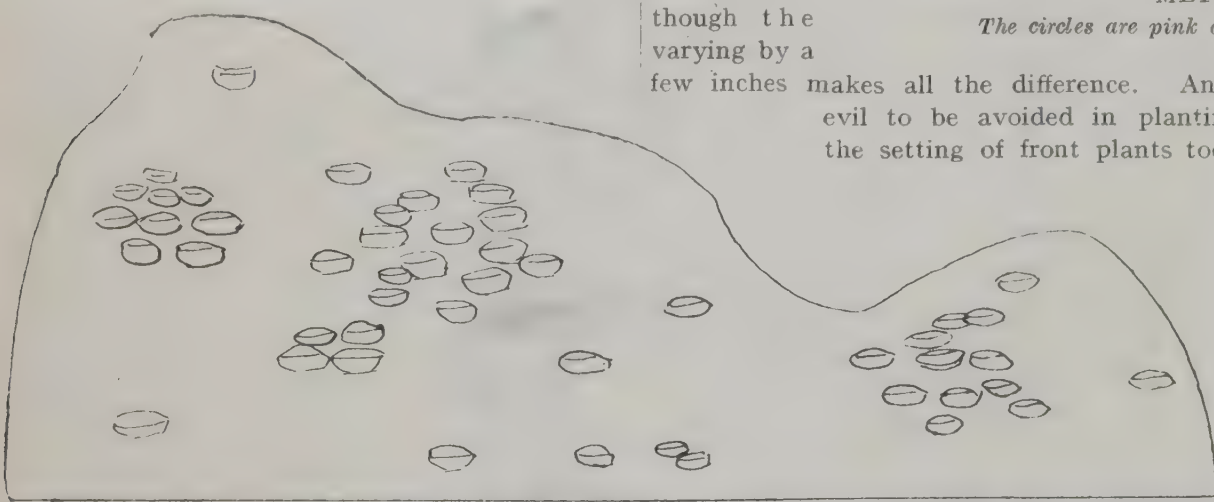
there is no occasion to be so particular. To conclude this instalment, it may be noted that many

Early Flowering Bulbous Plants besides the well-known Scillas, Winter Aconites, Iris reticulata, &c., which grow through low carpets of vegetation, may be arranged all over the borders without being very particular whether or no they may be under some deciduous fibrous-rooted plant. Tulips are rather diffident of so close relations, but Narcissi, Fritillarias and English Irises do not mind a bit. In like manner Colchicums grow through other plants in autumn, and even the fragile-looking Crocuses, of which the common *C. speciosus* is perhaps the most engaging, do likewise. Individual taste must, of course, be considered in these, and, indeed, in all arrangements.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

(To be concluded.)



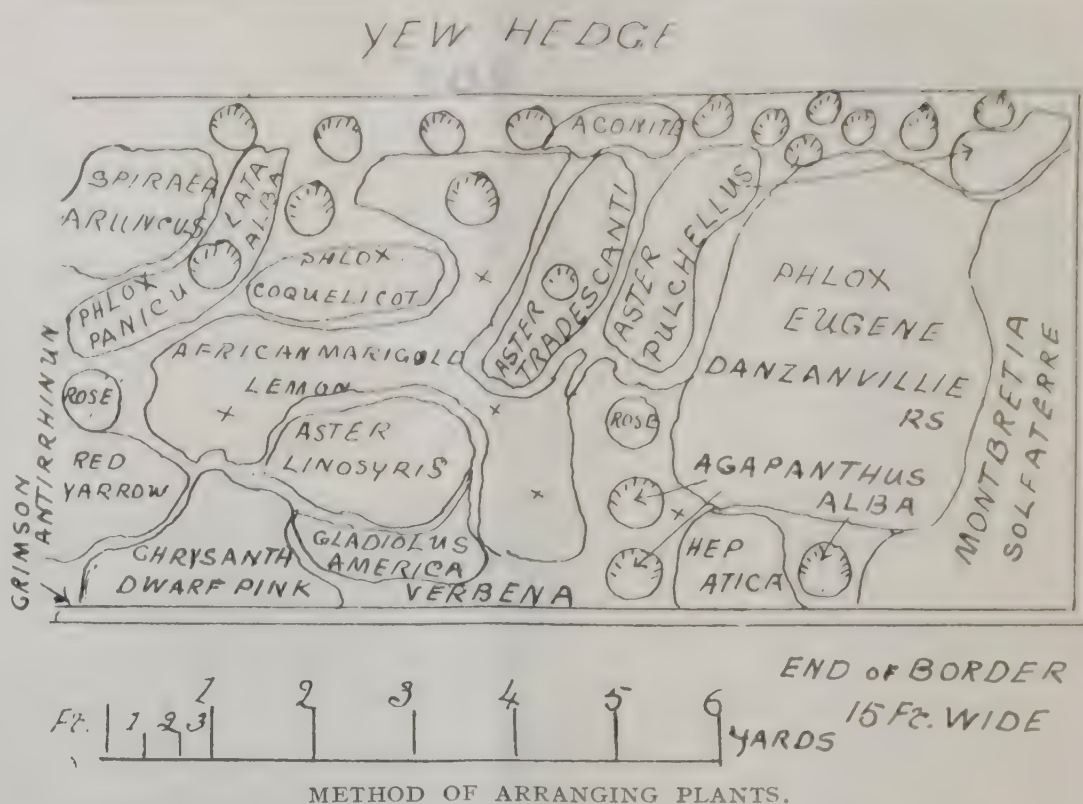
EDGE

AN EFFECTIVE WAY TO GROUP GLADIOLI, USING A CARPETING PLANT TO COVER BARE SPACES.

pyramidalis widely spaced, with dwarfier plants carpeting the ground. The illustration shows how to arrange Gladioli near the edge or front of a border with carpeting vegetation among them, such as Viola, Cornflower, or other suitable plant. Nor need there be too close adherence to the well-trod path of clumps of one species or variety of plants, a very nice by-path to loiter in occasionally being a mixed planting in carefully selected parts. It is perfectly wonderful, notwithstanding the many well-considered notes we have all read on colour grouping—good, bad, and indifferent—how plants themselves possessed of very inappropriate colours yet combine to give a happy whole. One of my own

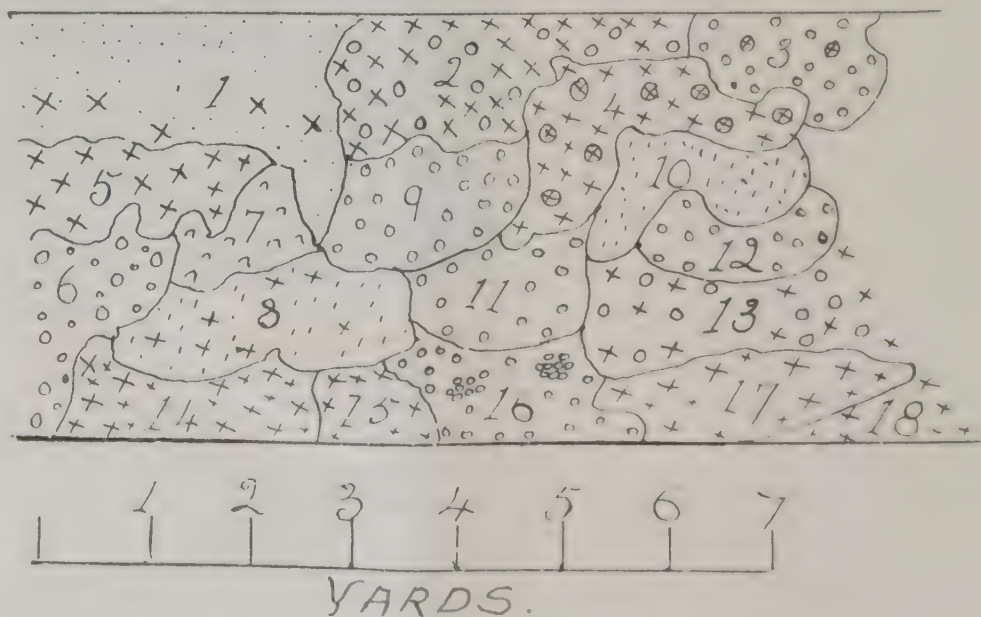
Colour Combinations of the past year commenced with sulphur Montbretia and lilac Phlox, and passed on to a broad groundwork of Verbena, dwarf pink Chrysanthemum, lemon African Marigold, with taller plants dotted among them of Gladiolus America, Francoa ramosa, Phlox paniculata alba, P. Coquelicot, a few Asters and single Hollyhocks, and in front Agapanthus, white and blue. Here in the space of a few yards run is quite a constellation of floral stars, ranged apart from all the rest of the border, though forming at the same time an integral part of it. One of the most difficult things in the arrangement of plants is the planting. Workmen invariably

back. Whatever the edging to the border may be, the front plant should touch it. This, of course, with some things entails the pruning of encroaching shoots, &c.; but that is infinitely to be preferred to the bare and ugly soil that is the concomitant of a space left between the verge and the plants. Similarly, when a very tall plant is arranged behind a dwarf one, the former should be planted so that the two touch, and it is always a good rule in planting to set close those parts that would appear bare, though further back and unexposed to view



METHOD OF ARRANGING PLANTS.

The circles are pink and cream Hollyhocks, and the crosses Francoa ramosa.



SKETCH SHOWING COMPARATIVE DISTANCES TO PLANT.

1, Helianthus Miss Mellish; 2, Phlox paniculata (O) and Aconitum japonicum or A. Wilsonii (X); 3, Solidago canadensis; 4, Hollyhock Rose Queen (cross in circle) and salmon rose Larkspur (X); 5, deep blue Larkspur, extending into No. 1; 6, Lobelia cardinalis; 7, Chrysanthemum maximum King Edward VII.; 8, Aster acris; 9, Antirrhinum Golden Chamois; 10, Aster Pluto; 11, Phlox Elizabeth Campbell; 12, Helenium grandicephalum cupreum; 13, Campanula pyramidalis alba and blue Cornflower; 14, purple East Lothian Stock; 15, Anemone japonica Profusion; 16, Gladiolus Baron J. Hulot (O) and a carpet of Nepeta Mussinii; 17, Aster Linosyris; 18, Montbretia Vulcan.

GARDENING FOR BEGINNERS.

TREES AND SHRUBS FOR WIND SCREENS.

SHELTER in a garden is one of the secrets of success with many plants. Almost the first thing to do when making a garden in a windy or exposed place is to plant trees and shrubs to shelter it.

The best evergreen tree for bleak positions is the Austrian Pine (*Pinus Laricio austriaca*). To make a screen at once, plant 6 feet apart now, and then, when the trees touch, every alternate one must be cut out, leaving them 12 feet apart. Sometimes it is necessary to plant two or three rows. These may be all Austrian Pines; a fast-growing Poplar may be used, or Spruce and Larch. The Poplar is one of the quickest-growing and one of the most valuable screen trees, thriving well in the smoky atmosphere of our towns and suburbs.

The Canadian Poplar (*Populus canadensis*) is very fast-growing, but, being rather spreading in habit, can only be planted where ample space exists, though it will stand a little pruning. When a screen is required quickly, and one which will not shade the surrounding ground too much with its branches, there is nothing to equal one of the fastigate growing Poplars, *Populus alba pyramidalis* (*P. bolleana*) or the Lombardy Poplar (*P. nigra pyramidalis*), the former for preference. The illustration depicts a row of *P. bolleana* planted three years ago as a screen. The average height of the trees was then 8 feet. With one or two exceptions they are now 18 feet to 20 feet high, a good illustration of the rapid growth of this attractive and desirable tree. It is readily propagated from cuttings; those from which the trees in the accompanying illustration were grown were inserted six years ago last November. The distance apart for planting varies; 10 feet from tree to tree is a suitable distance, but an immediate effect may be secured by planting at half this distance, this amounting at once to practically a hedge. The Poplar is one of the easiest trees to transplant successfully; trees 10 feet or 12 feet high move with seldom a failure. The Aucuba, Laurel, *Berberis stenophylla* and *B. Darwinii* are useful evergreen shrubs to plant for shelter. Equal to these, or even better when the soil is suitable, is the common purple *Rhododendron* (*R. ponticum*). Screens of trees in

Town and Suburban Gardens are very valuable. One of the drawbacks and evils of building houses so closely is that the gardens are so much overlooked, making secluded nooks few and far between. This robs a garden of half of its pleasure. In some gardens old trees were left standing when the houses were built; in others, young trees have grown up since. One almost invariably finds the shade and shelter of trees very much appreciated and valued by the owners. Sometimes there is one disadvantage, and that is, when the tree or trees are in such a position, while they seclude portions of the garden from the surrounding houses, they also render a part of it useless for flowers. When planting trees, especially in small gardens, this point must be considered. For this reason one or other of the fastigate Poplars should receive consideration, as while they form a splendid screen, only a comparatively small light space is occupied by them. As already stated, they grow quickly,

and will thrive in almost any kind of soil, and in an atmosphere that would be fatal to many kinds of evergreen trees.

A. O.

THE CULTIVATION OF FIGS.

THE Fig as a tree is easily grown. In many instances, however, the inexperienced cultivator fails to secure a crop of fruits on the trees. Although very small trees usually possess many roots, a fair proportion being fibrous, such specimens will not mature fruit until the new soil has become thoroughly permeated with roots, and, moreover, it is essential to success that the rooting medium be a very firm one.

Unlimited rooting space means much growth and few fruits. Amateurs and others who possess

done while the fruits are swelling. Admit air freely in fine weather.

Trees in the Open Air.—Confine the roots to a small space—in a brick pit 18 inches wide, 15 inches deep and 3 feet long. This space will suffice for a tree for many years. Use a similar compost to that before advised, and do not over-prune. Black Ischia and Brown Turkey are two fine varieties.

SHAMROCK.

WHAT TO DO WITH GARDEN REFUSE.

THE very best method of turning garden refuse to account is to burn it and apply the resultant ashes to the soil as manure. Experiments conducted for fourteen consecutive years



YOUNG, ERECT-GROWING POPLARS PLANTED AS A WIND SCREEN. THESE WERE RAISED FROM CUTTINGS PLANTED SIX YEARS AGO.

small glasshouses may grow Figs in pots as well as in the garden. The trees would only remain in the house a few months to yield fruits before those in the open air matured theirs; then they must be placed outside, but be carefully attended to. If slightly forced in the first instance, two crops may be grown on the same trees in one year.

Young Trees in Pots.—I will very briefly describe how these should be treated. Repot them in pots large enough to contain their roots and about as large a bulk of soil. Have clean pots and crocks to ensure good drainage; the compost must consist of fibrous loam three parts, and one part brick and mortar rubble. To a bushel of the combined parts add a 5-inch potful of bone-meal. Trees that have been so potted for one year at least and become established in the pots should be subjected to a forcing temperature; not recently potted ones. Manure is not necessary in the compost as all feeding should be

at the Worcestershire Experimental Gardens, Droitwich, have proved that burnt garden refuse is a very valuable manure, so much so that the latest report says "That decayed and burned refuse of the garden when *used alone* on the same ground for fourteen consecutive years is a valuable source of plant food which gives good results about equal to those obtained from an application of stable manure at the rate of 16 tons per acre to the same crops under equal conditions in all other respects."

The above extract shows that the gardener who takes care of his refuse is to some extent independent of stable manure. By burning, old stalks, prunings and similar refuse can be turned into a good fertiliser, and burning, it should be remembered, is definitely destructive of whatever garden pests may chance to be met with upon and about the refuse. A corner of the garden, screened by a rustic fence with climbers up it, will generally provide a hiding-place for the refuse heap. J. F. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Melons.—It is better practice to plant the first batch of Melons directly from the small pots in which they were raised than to pot them into larger pots and plant at a later date; therefore a hot-bed should be made up and the soil placed in position a few days before the plants are ready to put out, for if once they are allowed to become stunted, the prospect of a successful crop will be much reduced. Melons succeed best in rich, turfy loam, into which a small quantity of old lime rubble may be mixed. The depth of soil should not be less than 10 inches, and must be made firm by ramming after it has become warmed through. Another sowing should be made directly each batch of plants is put out if an unbroken supply is desired, and at least two varieties be planted in each house with a view to succession. Eminence and Hero of Lockinge are well worth growing.

The Propagation of Vines.—This is an easy matter, providing a warm pit or house is available for the purpose. The Vine eyes should be inserted in small pots of sandy loam and placed over a gentle hot-bed. They will soon start, and when two or three leaves are formed they should be carefully potted into 5-inch pots. The most suitable soil is turfy loam, a small quantity of old lime rubble, and a little bone-meal. After potting, the plants may be placed over a gentle hot-bed until well rooted, when they must be potted and kept growing in a warm, moist atmosphere. The compost for the final potting should be of a rougher nature, and must be made moderately firm. The temperature of the house may range from 70° at night to 85° by day with sun-heat.

Plants Under Glass.

The Fernery.—Now that the majority of Ferns are at rest, it is advisable to pot the plants as soon as possible. The compost may consist of turfy loam and peat in equal parts, with sufficient sand and fine broken crocks to keep it in a porous condition.

The Bougainvillea.—This plant succeeds better on the roof of an intermediate house than in a warm stove. Here at Frogmore it is trained to the rafters of a cool show house, and given ample space for the development of its drooping flowering sprays. It produces a grand effect throughout the season. The Bougainvillea does not require a long period of rest, and may be pruned back to the leading stems as soon as possible, leaving sufficient well-ripened shoots to cover the wires or extend the plant. Plants in pots may also be pruned and placed in an intermediate house until growth commences, when they may be carefully potted and placed in a temperature of 65°, where the syringe may be freely used during bright weather.

Cyclamens.—The most forward plants may now receive a light top-dressing of Clay's Fertilizer about once a week. Keep them near the roof glass in a temperature of 55° until they are well in flower. Seedlings raised in September and wintered in pans may now be potted in small, clean pots, and placed on a bed of ashes quite near the glass. Syringe them twice daily, and keep a sharp look-out for green fly, which will soon cripple the plants if not destroyed. Seeds may also be sown now to produce plants for flowering next season.

The Flower Garden.

Dahlias.—Now is the time to place Dahlia tubers in gentle heat for the purpose of increasing the stock of any particular variety. A pit with a temperature of 60° will suit them well. When the young shoots begin to grow, they should be fully exposed to the light to promote sturdy growth. When they are about four inches long, they should be removed from the tubers with a sharp knife, and inserted in small, clean pots of sandy soil which has been passed through a fine sieve. The pots may then be plunged in a bottom-heat of 80° and kept close until roots are produced, after which they should be gradually exposed to light and air, and potted into 5-inch pots as soon as ready. Dahlias may also be raised from seed

which should be sown in February. If potted up as soon as ready, they should produce an abundance of flowers from July onward.

Sweet Peas.—Some of the best varieties should be sown in small pots at once for flowering in June. Only a few seeds should be placed in each pot. It is advisable to germinate the seeds in gentle heat, but as soon as the seedlings are through the surface they should be kept quite close to the roof glass, and nothing more than protection from frost attempted. The ground should be trenched, and a liberal supply of good farmyard manure mixed with the soil.

The Kitchen Garden.

Peas.—A sowing of round-seeded Peas may be made now without fear of the weather injuring either seeds or plants, providing a sheltered position is chosen for the purpose. A warm south border, which has been trenched and manured in the autumn, will suit them well. The Pilot is one of the best for this purpose, being very hardy and the quality first class.

Parsnips.—The ground for this crop should be got ready as soon as possible. When dry enough to crumble under the foot, the drills should be drawn 18 inches apart and the seed sown carefully, selecting a quiet morning for the purpose.

Carrots.—A small sowing of Early Gem Carrots may be made on a warm border as soon as the soil is in a fit condition. Protection from frost may be afforded by a light sprinkling of dry Fern, if necessary.

Shallots may now be planted in shallow drills 1 foot apart.

Jerusalem Artichokes.—If not already done, this crop should be lifted as soon as possible. The largest tubers may be placed in a stove, and the medium-sized ones selected for planting. This work may also be done at once.

Cabbage, Brussels Sprouts, Lettuce and Cauliflowers should be sown as soon as possible. If only a small supply is necessary, the seeds may be sown in boxes and placed in a slightly heated pit, or they may be sown in a cold pit, providing the soil is placed in the pit for the purpose.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Jerusalem Artichokes may now be planted in most places, provided the ground is at all suitable. In a great many gardens this crop receives but scant attention, and, like the herb border, anywhere seems good enough for the plants. Yet what a difference there is when they are well cultivated. If the ground has not been previously prepared, planting may be done as the digging proceeds. It will be better to defer planting the Chinese variety, *Stachys tuberifera*, till some time in March. To grow it well in the North, it requires to be planted in light soil on a warm border.

Parsnips may now be sown where one can get the soil into working order, but defer sowing should the soil be at all wet. It is a good plan to fork over the soil in the morning and sow in the afternoon. Where Parsnips are required for exhibition purposes, the sowing may be done any time, provided the soil has been prepared beforehand for filling up the holes. Should severe weather set in after sowing, the seed may be protected by small pieces of slate.

Broccoli, in very cold districts, will require some protection. There are a great many ways of doing this, and all more or less good. The method I find most effectual is to use dry leaves placed along the rows, as it is the stalk that suffers from damp and cold.

Celery will also require protecting at this season; and for those who do not have a supply of boards, a very good substitute will be found in ordinary stable litter.

Lettuces.—A small sowing of Lettuces, such as Sutton's Nonsuch, may be made for growing on in frames. They will be greatly relished in spring, when salads are so scarce.

Radishes.—Continue to make a small sowing of Radishes, as, like Lettuces, they are more appreciated in the spring than when one has a surfeit of them.

Winter Spinach.—This Spinach will be greatly assisted by running the hoe between the rows frequently and giving a slight dressing of sulphate of ammonia.

The Flower Garden.

Lobelias.—Where it is intended to raise Lobelias from seed, no time should be lost in sowing, and, as it usually germinates like grass, sow sparingly. Plants that have been wintered in a cool house and are intended for stock purposes should be introduced into heat, so that cuttings may be secured as soon as possible.

Heliotrope.—Where large quantities of this useful bedding plant are required, propagation should start forthwith, so that the earlier-rooted cuttings can be topped and struck later.

Alyssum.—The variegated form of Alyssum is again coming into favour, and as it does not root as readily as one would wish, no time should be lost in getting the stock plants into congenial quarters.

Box Edging.—Where it is intended to make up blanks or replant Box edges, the present is a very suitable time for this work. Preserve all the trimmings that would be suitable for cuttings, and make up a few lines for future use.

Epilobium rosmarinifolium is a charming plant for a marshy spot in the flower garden. It grows about two and a-half feet high, is compact in habit, and does not ramble so much as *E. angustifolium*.

Senecio wilsonianus, with its Eremurus-like flowers, is also a grand acquisition for such places.

Polygonum oxyphyllum, with its snow white plumes of fragrant flowers, should also be included. No collection of bog plants should be without these three.

Gilia coronopifolia.—Many gardeners fail to flower this handsome annual by being too late in sowing. To have it in flower in late summer, the seed should be sown at once.

Calceolarias.—Continue to exercise the greatest precaution in admitting air to Calceolarias after a spell of hard frost. I have seen hundreds go off suddenly through carelessness in opening the lights too freely, and thus giving the young plants a severe check.

Hardy Fruit.

Apricots.—All pruning and tying should now be completed, as in sheltered spots they will soon show flower. If they have not been protected by netting or other material, this should be done at once. A good herring-net, doubled, is as good a protection as any, and this may be kept off the trees with forked sticks placed at intervals along the wall.

Gooseberries.—These may be syringed now with a good winter wash or Quassia Extract. This will go a long way towards keeping them clean and, acting as a preventive of caterpillar. Indeed, where the plantation is not over-large, it will pay to go over them frequently, using an Abol syringe.

Plants Under Glass.

Gloxinias that have been stored during winter may now be gone over and carefully examined for rot. Turn them out of their pots, and place the bulbs in boxes among some leaf-mould. Put them in a warm house, potting them as growth advances.

Caladiums.—Almost the same treatment applies to Caladiums, only they will require a little more liberal treatment.

Malmaison Carnations in 3-inch pots will now be ready for potting in 6-inch pots, provided the soil has been prepared as advised last week. Pot fairly firmly and water sparingly; indeed, they should not require water for some days. Cuttings of the Perpetual varieties, rooted about the New Year, should now be ready for potting on singly. They ought to be handled very carefully and placed on a shelf near the glass. Those rooted earlier may now be pinched well back, which will lay the foundation for a good sturdy plant.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N B

IS THE DAFFODIL A FLORIST'S FLOWER?

"YES" AND "NO."

SOMERSET," in his very interesting articles on "What is a Florist's Flower?" in THE GARDEN for September 13 and 20, 1913, did "Daffodils" and its author well. I sincerely thank him. It is pleasant to feel that my effort has met with a Daffodil-lover's approval, for such I feel my unknown friend must be. As I said in my recent notes, my reply has been simmering. So much is in the pan that if it were all poured out it would fill a whole number of THE GARDEN. A good job it did not, for I must confess I am a florist. In one way we all are. "Somerst" himself is one, else why does he relegate that most charming Santa Maria to the world of poor things. More than once, too, after having heard Mr. Reginald Farrer discourse, as only he can do, on the jollinesses and the good formnesses of some Saxifrage or other alpine, have I chimed in, "Yes, all right; you are getting on. Fancy not being contented with what Nature first gave you. You really are, after all, a florist in disguise." Some time ago I was an onlooker at a scientific committee meeting of the Royal Horticultural Society, when I heard Sir Harry Veitch explain how John Heal had first made a new race of winter-flowering Begonias and then improved it. "Floristy" again. I often think the larger half of mankind are Jesuits at heart, but they do not like to be told so. I feel certain three-quarters of the gardeners of the world, if not seven-eighths, are florists in the sense that they attach great importance to form, size and substance, and almost invariably like a well-filled-up flower to one more scantily endowed. Maximus is preferred to Santa Maria by "Somerst." Probably any jury of twelve would give as their verdict, "So say all of us." A florist, then, in his childhood state is one who is not content with all that Nature has given him. He wishes to change and improve, he will tell you, the vegetable kingdom. He would like to make fruit more luscious and sweet, and flowers more attractive, and if the true spirit is in him, this would be one of his works of maturer years. In our own Daffodil world, what else have Engleheart, the Williamses, Crosfield, Wilson, Brodie of Brodie, Gore-Booth and the whole company of hybridisers been trying to do but to improve the flower? Gentlemen, we are all florists. If so, is not our flower a florist's flower?

One day last summer I was about to be taken over an interesting garden in Kent by its owner and a friend. By way of letting me down lightly and so that I might not be disappointed with the show, one of them said, "Oh, I know you are an arch-florist." I took it as a compliment, for the most arch-florist I ever knew was old James Douglas, and a more charming and gentler-mannered man I have never met. One of the red-letter days of my florist's life is May 5, 1909, the day I spent with him at Great Bookham in the midst of his Auriculas. One of my most cherished books is his "Hardy Florists' Flowers," which he gave me as a memento of the day. No one who has read Horner's touching preface to this little book can ever belittle them again: "A touching history if it could be written would be the nurture and ministry of florist flowers. They have been the delight of many a

man in whom the love of Nature was inborn and inextinguishable, but whose means were very spare, whose leisure time was very scant, and whose advantages in pure air and light and garden space were very poor and cramped. . . . Yet did the Spring smile on him in his Polyanthus and Auriculas and Pansies, and Summer visit him in the bloom of his Tulips, Pinks, Ranunculuses, Carnations and Picotees. In one or more of these, his love of Nature found expression, and enough to live upon." The foregoing are words pregnant with meaning. The Daffodil has had a different upbringing. It has not had to go through the struggling times of the Auricula or the Pink. It has never been a flower of the little back garden or small hired plot; but, nevertheless, there is in the Daffodil-grower the same spirit and the same human nature as in the more humble cultivator of the Pink and the Pansy, and I feel confident that the one great stimulus that has encouraged and still encourages them all in their work is the stimulus of the show. It is the far-off ideal which must never become a reality which lures them on. I quite recognise the possibility of that ideal being a wrong one, but I do say there must be one, otherwise why is not Mme. Plomp the equal of Duke of Bedford, and Duchess of Brabant of Evangeline, and ornatus of Tennyson? Otherwise, why not pick up any Dick, Tom or Harry to judge? Why was I paid to go all the way to Barnstaple last spring to judge the Devon exhibits? Why did not the committee save a big railway fare and get some neighbouring head-gardener to award the prizes? Why? Because the Daffodil is a florist's flower; because, already young as it is, there have grown up certain standards of excellence which I as an expert know and recognise, and according to which I feel bound to judge, and which the ordinary non-specialist will not know. I do not think "Somerst" and I are very far off when we have each of us scratched the other deep enough. One question to him to clinch my argument and to end Part I. Would he prefer the head-gardener at the nearest big place to where he lives to judge a collection of his at a show, or, let us say, Mr. P. D. Williams? JOSEPH JACOB.

(To be continued.)

GARDENING ACROSTICS.

SOLUTION AND NOTES OF ACROSTIC No. 7.

C. CRISPA—PARSLEY.

* 1.	C	OWSLI	P
† 2.	C	OLUMELL	A
‡ 3.	R	ED SPIDE	R
§ 4.	I	MPATIEN	S
5.	S	UN DIA	I
¶ 6.	P	ICTURESQU	E
** 7.	A	NTIPATH	Y

Cryptogramme crispa (syn. Allosorus crispus) is the well-known Parsley Fern which grows among *débris* on many British mountains. It gets its popular name from its resemblance to the familiar Parsley of our kitchen gardens.—See Druery's "British Ferns." * Cowslip balls and Cowslip wine are both made from the Cowslip of our meadows. † Columella, who lived about A.D. 50, wrote upon agriculture and gardening. He wrote twelve books, "De re rustica," and one upon trees, "De arboribus." ‡ The red spider revels in a dry atmosphere and dislikes damp. § The generic name of the garden

Balsam is Impatiens. A popular strain is called the Camellia-flowered. || "I do not rule unless I am ruled" is the motto upon a sundial in Uppingham. ¶ Sir Uvedale Price, who died in 1829, had great taste in laying out gardens. He wrote a celebrated essay on the "Picturesque" in 1794. ** See Bacon's "Sylva Sylvarum" under Century V. In the fifth edition, page 101, sympathy and antipathy in plants are discussed.

RESULT OF ACROSTIC No. 7.

In this acrostic it was possible to get nine marks, one for each correct "first" and "last," and one for each correct light. The following marks have been awarded:

Nine marks.—"Rustic," Wm. Bond, "Bow," "Westbank," "Boarsvale," "Miller" and "Hero."

Eight marks.—"Ping," "Jan," "M. M.," G. D. King, "White Lady," "Elm," "St. Kevins" and "Nautilus."

Seven marks.—R. Chapman, M. Browne, "Penwarne," "Shamrock," Wm. Slocombe and Ernest Ballard.

Six marks.—"W. J. W.," "Brixtonian" and "Rusticus."

Five marks.—"Tempus Fugit."

Four marks.—N. G. Hadden.

Two marks.—"Bees Wing."

ANSWERS

TO CORRESPONDENTS.

FLOWER GARDEN.

PLANTS FOR JAPANESE GARDEN (M. H.).—Frequently where the garden is small, it is not confined to Japanese plants entirely, but a variety of hardy Heaths and Azaleas are made use of as carpeters for Lilies and other plants. In this way Azalea mollis in variety is freely used, also Ledum palustre, Kalmias and the like. Of hardy Heaths you might use the best varieties of Erica cinerea atropurpurea, coccinea, rosea and astrosanguinea. E. carnea (Winter Heath), E. codonodes and E. mediterranea hybrida would be worth growing, too, as they are among the most valuable. Any of the varieties of Lillium speciosum, L. longiflorum, L. elegans and L. tigrinum could be associated with these plants, while Primulas japonica and pulverulenta would be quite at home in wet or damp places. In addition, Iris laevigata should be made much of; there are endless varieties, and no such garden would be complete without them. Japanese Maples and small-growing Bamboos are among other good things. Just what should be planted, and where, depends very much on the size of the garden and how it is laid out.

CHRISTMAS ROSES NOT FLOWERING (A. V. P.).—If after flowering last spring you really did cover the plants with manure, you have probably poisoned them for the time being, and it will take them some time to recover. The entire absence of new leafage during 1913 shows that there is something radically wrong with them; as during that time they would be in a state of decline. This leaflessness, whatever the cause, is doubtless responsible for all shortcomings, the plants having suffered a loss of root fibres in equal proportion. The soil cannot be blamed, seeing the plants have succeeded so well hitherto. All you can do now is to place a handlight over the clumps to encourage the development of the flowers, and, these over, lightly fork about the plants and work into the soil a dressing of lime, which will assist to neutralise the effects of the manure. In all probability there will be but a meagre leaf development this year, as a direct result of the debilitated condition of the plants, and, if so, your remedy will be lifting, dividing and replanting in August next.

TREES AND SHRUBS.

FLOWERING SHRUBS FOR EFFECT (C. T.).—The following shrubs are suitable for your purpose. Back row: Lilac de Louis Spæth, L. Marie Legraye, Berberis stenophylla, Ribes sanguineum atrosanguineum, Laurus tinus, Viburnum Opulus sterile, Forsythia suspensa, Cotoneaster Simonsii, Diervilla Abel Carrière and Philadelphus coronarius. The other row may consist of Daphne Mezereum, Spiraea arguta, S. Anthony Waterer, Diervilla Eva Rathke, Cotoneaster horizontalis, Philadelphus Lemoinel erectus, Hypericum patulum Henryi, Prunus japonica flore pleno, Kerria japonica flore pleno, Berberis walliebiana, B. Aquifolium, and silver and golden variegated Tree Ivies. Do not place the plants very close together, for they will grow quickly. Should the ground appear bare the first season, a few annuals may be planted in the more open spaces.

THE GREENHOUSE.

ADVICE CONCERNING VARIOUS PLANTS (*A Reader*).

(1) In order to grow the very large heads of Hydrangeas, cuttings should be taken in July of the strongest terminal shoots, such as you may feel sure will flower the following season. When rooted, they should be shifted into 4-inch pots and grown in a frame. The original leaves should drop off in the course of the winter. In the month of February the plants should be shifted into their flowering pots, 5 inches or 6 inches in diameter, according to their vigour. A good compost, mainly consisting of loam and thoroughly decayed manure with a little sand, will suit them well. If there is no manure available, leaf-mould may be substituted, giving the plants stimulants later on. After potting, the plants must have a good position in the greenhouse. The small buds are of little account, and may be taken off or left on as you think fit. (2) As you require your *Maréchal Niel* Rose in early spring, we should not prune it in any way now except to remove any weak and exhausted shoots. Under the conditions named, any pruning required had, we think, best be done after flowering. (3) It is very probable that the reason of the non-flowering of your *Passion Flower* is that the roots have an unlimited run, hence the strong growth, while at the same time they are very likely in an unsuitable soil. The plant should certainly be kept free from suckers. We should certainly advise you not to prune the plant now, but to wait until the end of the season, as it may possibly flower during the coming summer. The white markings on the leaves we do not understand, but if you send us a few leaves we can, perhaps, help you in the matter. (4) Good plants of the two species of *Asparagus* named by you can be obtained from seed in about eighteen months, provided (and this is an important item) the conditions are favourable for their quick development. In their earlier stages they are far better suited in a stove temperature than in a greenhouse. If the plants of *A. plumosus* referred to by you are the result of seed sown last year, the pots—5-inch and 6-inch—are much too large for them at present. (5) All the pruning *Lapagerias* need is to cut out any weak and exhausted shoots, if necessary, to prevent overcrowding. The strong shoots pushed up from the base must not be interfered with in any way, except to secure them as they lengthen, in order that no harm comes to the succulent point.

MISCELLANEOUS.

GRUBS IN MANURE (*P. M. H.*).—The grubs and beetles are those common in manure, on parts of which they feed. They are not likely to be harmful to plants.

CHARCOAL AS MANURE (*W. R. F.*).—Charcoal is of slight value as a manure. Its main use in the garden is to mix with the potting soil for plants which have to stay long in their pots, in order to keep the soil open and to absorb vegetable acids, which would tend to make the soil sour. Just as one charrs wood posts to check decay, so charcoal decays but slowly, and parts with equal slowness with any mineral salts that would be of value to the soil.

SOOT AS MANURE (*Anxiety*).—You may use soot direct from the chimney for making soot-water. In buying soot it should be remembered that the lighter it is in bulk, the better, for that is an indication of purity. Its composition varies, but the average value of the nitrogen in it (the only important constituent) is 6d. a bushel. One should expect four bushels to weigh a hundredweight, and at that rate the soot would be of somewhat greater value.

VARIOUS QUESTIONS (*W. S. D.*).—It is possible that Rose Dorothy Perkins would suit your purpose as well as any. All Roses, however, like a fair amount of sun, and you would be best advised to give it as light a position as possible. *Jasminum nudiflorum* may be planted at once, but you had better not plant *Crataegus Pyracantha* until April. You ought also to be careful to procure the latter shrub established in a pot, as it usually transplants rather indifferently from the open ground. *Jasminum nudiflorum* flowers during midwinter, and *Crataegus Pyracantha* blossoms about the end of May. Both plants may be procured from any of the firms of general nurserymen who advertise in *THE GARDEN*. The address of Mr. D. B. Crane is 479, Archway Road, Highgate, London, N.

VARIOUS QUESTIONS (*Trent*).—There is not much to choose between the merits of various kinds of climbing Roses which may be grown as specimen weeping plants; but perhaps for general usefulness Dorothy Perkins takes the lead. *Hiawatha* is also very beautiful when grown as a weeping plant. Most people are guided in their choice by the colour of the flowers. Nothing can be done to your *Ampelopsis* to cause it to retain its leaves later in autumn. The leaves of the large-leaved forms usually fall more quickly than those of kinds which have small foliage. It is usual for the leaves to increase in size and alter in shape as the plants advance in age. Some difference also occurs when shoots from old plants have been used for propagation, as they are likely to form large leaves earlier in life than others which have been raised from plants with small leaves. Plants placed in very rich soil also have a tendency to form large leaves early in life, and it is usual for those growing in poor soil to colour more brilliantly than others which are in good soil. Gooseberry and Currant trees are often planted between Apple trees, with good results, although the crop of fruit may not be up to the standard of that grown on trees occupying more open positions. It would be as well to confine the bushes to the more open parts of the border. In some of the market gardens about London it is usual to plant Lily of the Valley, Christmas Roses, Wallflowers and Narcissi beneath the shade of Apple and Plum orchards.

COAL-ASHES FOR THE GARDEN (*H. S. W.*).—We do not think the use of coal-ashes in the garden, except for the purpose of lightening the soil or for making cinder paths, is to be recommended. Their manurial value is very slight, and they are apt to contain substances poisonous to crops unless they have been exposed to washing by rain for some time. It would be better to weed the lawn, top-dress it with some good soil, and, when growth begins in spring, manure it with some sulphate of ammonia at the rate of half an ounce to the square yard, not more. From what you say with regard to the pests your garden suffers from, we should imagine the soil to be sour and in need of a dressing of lime. When the Carrots are through the soil and the fly which is the parent of the maggot is about, sprinkle along the rows with paraffin-moistened sand, and take care that the earth about the Carrots is not loosened so that the fly can make its way in. The cigar ash, used sparingly, would possibly be beneficial.

WEEDS ON LAWNS (*Learner*).—You can do little good by covering your croquet and tennis lawns with sulphate of ammonia or lawn sand and then resowing them. A better plan will be to have as many of the coarse weeds as possible pulled up by the roots at the present time. The "Champion" Daisy Lifter is a good tool for the purpose. Then in March, in mild weather, proceed to prick the surface of each lawn over with a fork, and then sow it with good seed, afterwards providing a light covering of good soil which is free from weed seeds. A light rolling, when the surface is moderately dry, will complete the work. As the old turf is doubtless full of weed seeds, weeds will continue to appear for some time. These must be pulled up and not allowed to seed. Next autumn give the grass a liberal dressing of bone-meal. This will encourage the grasses to outgrow the weeds. When the grass is vigorous, a dressing of sea-sand occasionally will encourage the finer kinds of grasses to outgrow the coarser kinds.

THE RHODESIAN WISTARIA (*BOLUSANTHUS SPECIOSUS*) (*F. J. H.*).—This is a leguminous tree, native of Portuguese East Africa, Rhodesia and the Transvaal. It is described and figured by C. R. Sim in his "Forest Flora and Forest Resources of Portuguese East Africa," pages 44 and 45. From his description we find that it forms a small ornamental tree, 20 feet to 35 feet high, with hard, white, durable timber, which is used almost exclusively for the spokes of wheels. The leaves are deciduous, pinnate, and made up of from nine to seventeen lance-shaped leaflets. The flowers appear simultaneously with the young leaves in spring. They are usually violet in colour, and borne in long racemes in a similar manner to the flowers of the *Wistaria*. In some districts it is called the Rhodesian *Wistaria*, and, in other places, the Van Wykshout or Maawthlu. It is not common in cultivation, is only grown from seed, and requires good deep soil and a subtropical climate.

PLANTS FOR HERBACEOUS BORDER (*W. S. D.*).—Although your garden is rather shaded, there is no reason why you should not be able to cultivate herbaceous plants fairly satisfactorily. Be careful, however, to well prepare the ground. Trench it from 1½ feet to 2 feet deep, and add manure if at all poor. Should you find that tree roots are likely to interfere with the border, cut them off at a point 2 feet or 3 feet outside the border. This should be repeated every second year. The following plants may be planted, all of which will blossom next spring, summer or autumn, according to season: *Delphiniums* in variety, garden varieties of *Phlox* for the lighter places, *Pæonies*, *Salvia virgata*, *Monarda didyma*, *Lychnis chalcedonica*, *Veronica teurcium*, *V. spicata*, *V. virginica*, *Anemone japonica*, *Asters* in variety, *Clematis recta*, *Galega officinalis*, *Lilium candidum*, *L. tigrinum*, *Helleborus niger* (Christmas Rose) for shady and moist places, *Saxifraga cordifolia*, *Pinks*, *Carnations*, *Lychnis coronaria*, *Acanthus* (various species) and *Oenothera biennis*. The last named is not a perennial, but renews itself by self-sown seeds.

NAME OF PLANT.—*Headly Grove*.—*Moschosma riparia*.

NAMES OF FRUIT.—A. D.—A, Allington Pippin; B, Yorkshire Beauty; C, Winter Peach; D, Blenheim Orange; E, Colonel Vaughan; F, Washington; G, Sugar-loaf Pippin; H, Wellington.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

ALTHOUGH cut flowers are exceedingly scarce just now, there appeared to be no appreciable falling off in quantity at the fortnightly exhibition of the above society held at Vincent Square, Westminster, on Tuesday last. Carnations were the most prominent flowers, and they were shown by numerous exhibitors. There was also a wide selection of Orchids, while *Cyclamen* again were well shown. But the leading feature of the exhibition was the vast collection of Potatoes from Messrs. Sutton and Sons, the famous Reading firm.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. J. Willard, E. Beckett, H. Markham, A. R. Allan, A. Grubb, A. Bullock, G. Reynolds, W. Poupert, C. G. A. Nix, J. Basham and James Gibson.

As already mentioned, Messrs. Sutton and Sons staged an extensive collection of Potatoes. No fewer than 150 varieties, all of them in the finest condition, were

shown. The firm's varieties *Carlsbrooke Castle* and *Stirling Castle* were to the fore, as well as a great many promising seedlings under number. The collection was made the more interesting by the addition of wild types and numerous hybrids. Certain Potato diseases, as preserved specimens, including the much-dreaded black scab, were also represented. The high award of a gold medal was deservedly given to this meritorious exhibit.

Messrs. J. Carter and Co., Raynes Park, S.W., received a silver-gilt Banksian medal for an interesting collection of stored vegetables, including Onions, Carrots, Potatoes, Beet, Leeks, Celeriac and Salsify. The Onion-Selected *Ailsa Craig* and Carter's Record were worthy of special mention.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), and Sir Jeremiah Colman, Bart., Sir Harry J. Veitch, Messrs. James O'Brien, de B. Crawshaw, R. A. Rolfe, F. Sander, F. J. Hanbury, R. G. Thwaites, W. Waters Butler, T. Armstrong, A. McBean, W. Cobb, J. Charlesworth, J. Cypher, J. E. Shill, W. P. Bound, F. J. Chapman, H. G. Alexander, C. H. Curtis, A. Dye, W. H. White, S. W. Flory, W. Bolton and Gurney Wilson.

A silver Flora medal was granted to Messrs. Sander and Sons, St. Albans, for a group of exquisite Orchids, including *Phalænopsis amabilis* *Illustre* and many superb *Odontoglossums*.

Messrs. Charlesworth and Co., Hayward's Heath, showed many superb *Odontoglossums*, of which *Doris* and *amabile splendens* were the admiration of all who saw them. Silver Flora medal.

A similar award was made to Messrs. J. and A. McBean, Cooksbridge, for a magnificent collection of *Cymbidiums*, in which *C. gottianum* was most plentifully shown.

Messrs. Armstrong and Brown, Tunbridge Wells, also received a silver Flora medal. Their group included many *Cymbidiums*, *Cypripediums* and *Masdevallias*.

Mrs. Norman Cookson, Oakwood, Wylam (gardener, Mr. H. J. Chapman), sent a beautiful collection of *Odon-tiodas*, in which the colours blended harmoniously. *Cypripedium Venus*, with six fine blossoms on the plant, was also shown. Silver Flora medal.

Silver Banksian medals were awarded to Messrs. J. Cypher and Sons, Cheltenham, for magnificent *Cypripediums* and *Calanthes*; Messrs. Stuart Low and Co., Bush Hill Park, Enfield, for *Cattleyas*, *Cypripediums* and *Dendrobiums*; and Messrs. Flory and Black, Slough, Bucks, for very select varieties of *Cypripediums*, *Cattleyas* and *Odontoglossums*.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), the Rev. F. Page-Roberts, and Messrs. E. A. Bowles, E. Hooper Pearson, J. Green, R. C. Notcutt, G. Reuthe, G. Gordon, J. Stevenson, C. Blick, C. R. Fielder, J. F. McLeod, J. Hudson, W. Howe, J. Jennings, W. Bain, J. Dickson, C. Dixon, A. Turner, Charles E. Shea, C. E. Pearson, W. P. Thomson, E. H. Jenkins, W. J. James, W. J. Bean, E. Mawley and A. A. Dorrien-Smith.

Messrs. Barr and Sons, Covent Garden, W.C., showed batches of the early *Cyclamen ibericum*, together with *Crocus* species, *Iris stylosa* in variety, *Snowdrops*, *Freesia refracta*, *Primula malacoides*, *P. obconica* of an excellent strain, and other winter-flowering subjects. The most remarkable item, however, was forced flowers of the mauve-coloured *Darwin Tulip* William Copeland, which in January is most unusual.

Messrs. Stuart Low and Co., Enfield, staged a nice group of Carnations, the best vases being of *Baroness de Brien*, *Satin Robe* and *British Triumph*. Some excellent flowers of Mrs. C. F. Raphael were also in evidence. Messrs. Low also displayed some very fine *Cyclamen* in pans, *Giant White*, *Salmon King*, *Vulcan* and others being noted. A pretty feathered variety, white on carmine ground, was included in the group.

The Misses Hopkins, Shepperton-on-Thames, had a small exhibit of rockwork, on which *Gentians*, early *Cyclamen* and hardy *Primulas* were seen.

Messrs. James Veitch and Sons, Limited, Chelsea, displayed a capital table of winter-flowering plants—the old double white *Primula* (*P. sinensis alba plena*), *Citrus japonica* in fruit, *Azaleas* (of which *Deutsche Perle* and *Mme. H. Siedel* were excellent whites), *Freesia refracta alba* (very fine), the white-flowered *Kalanchoë Dyeri* (a succulent from South Africa), *Lily of the Valley* and other good plants.

Messrs. R. W. Wallace and Co., Colchester, again showed a table of dwarf shrubs suitable for the rock garden. Some of these—*Ilex Perny*, *Thuja orientalis aurea nana*, *Juniperus globosa*, *Grevillea alpina*, *Cotoneaster buxifolia*, *C. thymifolia* and *Thuja orientalis aurea gracilis*—were quite good. Some select shrubby *Veronicas* were also shown.

Messrs. Piper, Bayswater and Barnes, staged a particularly good rockery exhibit, on which the early *Cyclamen* were beautifully colonised. These were chiefly of the *ibericum* section, and in their abundance were very charming. Rocks and rock shrubs were arranged on both sides, *Primulas*, *Origanum*, *Dictamnus* and other plants being noted.

Messrs. G. and A. Clark, Limited, Dover, showed *Primroses* and *Polyanthuses* of an excellent strain, in which varied shades of blue were seen. The richly coloured *Cloth of Gold* was also in evidence.

Messrs. J. Cheal and Sons, Crawley, had a pretty grouping of early *Cyclamen*, *Primulas*, *Primroses*, hardy *Heaths*, and alpinas in variety. The Portuguese *Heath*, *Erica codonodes*, was very charming.

Messrs. Young and Co., Cheltenham, showed a group of *Perpetual-flowering Carnations*, in which *La Mode*, *Marmion*, *Beacon*, and *British Triumph* were seen.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Our Sweet Pea Number.—Next week's issue will be largely devoted to Sweet Peas. We have secured some particularly interesting articles and illustrations relating to these flowers, and there is certain to be a big demand for that issue. Anyone requiring extra copies would be well advised to order them in advance.

Artemisia arborescens.—There is now a great demand for plants possessing silvery grey foliage. This *Artemisia* is one of the best, and it associates well with all lavender shades. If cuttings are inserted now, they will make good specimens by the summer, and on the approach of frost they may be lifted and potted for decoration indoors.

A Hint about Pea-Sticks.—When these are first received, it is a good method to undo the bundles and lay them in heaps on a spare piece of ground, placing heavy weights, such as logs of wood, on them. By doing so they become flattened out, and are therefore more serviceable, as well as being neater and going further. They may be treated like this either before or after they are sharpened, and are better still if they can remain weighted down until required for use.

Winter Aconites.—These are flowering quite a fortnight later this year than they did last, but we are pleased to find that the colour is much deeper and more characteristic. It is difficult to understand why they are not more freely planted, particularly in grass, or shrub borders, where the rich yellow blossoms are seen to perfection. Outdoor flowers in January and February are none too plentiful, and full use should be made of those that are available.

Raising Dahlias from Seed.—The value of Dahlias for decoration, both for the garden or vases, cannot be over-estimated, and few plants give such a succession of bloom during the summer, although for cutting the single and Collarette forms are generally preferred. Seeds should be sown now and placed in a little warmth; they will then make good plants for putting out in June. The ground they are intended to be grown on should not be heavily manured at the time of digging, as it encourages strong, sappy growth; but a little feeding when they are in bloom will be more beneficial.

A Tree for a Moist Situation.—Those who are desirous of planting an effective tree in a position where the ground is naturally wet, such as the vicinity of a pond or stream which is liable to overflow its banks, might try the variety of the Speckled Alder which is known to botanists as *Alnus incana ramulis coccineis*. It differs from the type by reason of the bark of the young branches and the buds being red, a colour which is very attractive in winter. Moreover, the male catkins are showy, for they also present a ruddy effect, especially before the pollen is ripe.

Like other Alders, it is in nowise fastidious regarding soil, providing it is on the moist side, and has the advantage of many trees by being able to grow in places subject to regular flooding.

The Alexandrian Laurel.—Everyone who cares for plants of interest should certainly have this useful decorative shrub. Of the many evergreens used during the winter, none can equal *Danæa Laurus*, with its graceful and glossy shoots. It is not difficult to grow, and when once established one can freely cut away the elegant shoots. The plant is closely allied to the Butcher's Broom (*Ruscus aculeatus*), being sometimes known as *Ruscus racemosus*; but it is more free and graceful in habit, and better in the rich glossy colour of the leaves and shoots, which have the grace of the airy Willow with the glossy green of the Camellia.

A Beautiful but Neglected Annual.—*Arnebia cornuta* is one of the most interesting annuals for the summer, and yet it is seldom seen. Its curious and yet beautiful flowers are rich yellow, marked with large, heart-shaped, black spots from the base to the tips of the petals, which on the second day turn to a deep maroon and finally disappear with age, leaving the flowers a pure yellow. It is of branching habit, from a foot to 1½ feet high, and blooms with unusual freedom all the summer. It is very valuable for cutting, as the flowers retain their freshness for some time in water. Seeds should be sown now and placed in a little warmth; these will make good plants for putting out at the end of April or early in May.

White-Stemmed Brambles.—The value of white-stemmed Brambles for winter effect is very apparent at Clandon Park, Surrey, where *Rubus biflorus* is planted in large beds by the lakeside. In the autumn the canes were heavily manured, and the results have fully justified the operation. *R. biflorus*, however, will in the course of time be quite outrivalled by the new and graceful species *R. giraldianus*, from China. The latter sends up strong canes 6 feet or 7 feet in height, which bend over and droop to the ground. As the canes are white throughout their entire length, each plant forms a most attractive subject. *R. giraldianus* may be quickly increased either by seed or by layering.

More Money for Wisley.—At the annual general meeting of the Royal Horticultural Society, to be held on Tuesday next at 3 p.m., the following resolution will be proposed and seconded: "The Council of the society be requested to create a special trust fund to carry on and augment the society's work at Wisley, and this meeting would approve of a part of the present surplus funds of the society being allocated to that purpose." All sorts of rumours are afloat as to the exact meaning of this rather nebulous resolution, and we presume details of the suggested augmentation of the society's work at Wisley will be forthcoming at the meeting.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The History of White Heather.—"R. O." asks, on page 42 of January 24 issue, whether there is any reference in any well-known book as to how white Heather came to be regarded as a symbol of good fortune and luck. The Rev. Hilderic Friend, F.L.S., in his "Flowers and Flower Lore," page 279, says: ". . . and even the Heather itself . . . is without any definite story or tradition." From the above I take it that the white Heather is included.—G. C. DUDDRIDGE.

Scarcity of Chrysanthemum Cuttings.—"Avon" refers, on page 31, issue January 17, to the scarcity of cuttings last year, but this peculiarity is noticeable in some varieties this season also, even among those that flower early. A market-grower recently showed me some hundreds of stools of Dorothy Ashley, a beautiful pink of recent introduction; but not a single cutting was visible, nor were there any signs of sucker growths, yet the stock last season produced an abundance of cuttings. Why?—T. W.

Mistletoe Peculiarity.

—I have a plant of Mistletoe 30 inches in diameter on an Apple tree, which is the result of ten years' growth and has never yet borne a berry. The growth is robust, of an intense bronzy green tint of colour. Why does it not fruit, I should like to know?—S. [It is probable that the plant in question bears male flowers only. The Mistletoe is peculiar in that it is sometimes unisexual and at other times bisexual. Our correspondent's best plan is to sow seed on the Apple tree next month in the hope of securing a berry-bearing plant. Seed may be sown by cutting a notch in the bark on the under side of a branch, and carefully inserting the seed therein.—ED.]

Rose Climbing Mme. Melanie Soupert.—It happens so rarely that the Rose-grower on the modest scale can add anything to Mr. H. E. Molyneux's descriptions of the newer Roses that, when the opportunity occurs, I feel that it can on no account be missed. In describing Burrell's climbing form of Mme. Melanie Soupert on page 47, issue January 24, he tells us how much he is looking forward to seeing the flowers in the coming season. I can assure him, good florist as he is, that he will have some difficulty in finding any fault with them. Somehow Mme. Melanie Soupert's charms disarm all criticism, yet many of us must at times have longed for blooms with a few more of the exquisite shell-like petals. This climbing form provides us with, making Mme. Melanie Soupert the finest all-round exhibition and

decorative Rose I know of. My plant has had somewhat hard fare for the last two seasons—an eastern exposure, and a mass of clay and a gravel drive to push its roots into. Yet even under these conditions its shoots are rioting far out of reach up the wall against which it was planted, and of all the blooms I have seen I cannot recall one with a single fault.—R. H. BIFFEN, Cambridge.

Primula pulverulenta Mrs. R. V. Berkeley.—I was interested to see Dr. Macwatt's note, page 42, issue January 24, on this beautiful variety of an extremely popular Primula, and can bear out his statement in regard to it failing to produce seed when fertilised with its own pollen. When it is pollinated with the type, seed is often formed, and a certain percentage come the variety in question, but the majority are *P. pulverulenta*. Two years or so ago, varieties, almost if not identical, appeared in various places among seedlings of *P. pulverulenta*, the seed being saved from plants cultivated in this country. Messrs. Barr and Sons



A BOWL OF ROSE CLIMBING MME. MELANIE SOUPERT GROWN BY PROFESSOR BIFFEN.

offer seed of *P. p. Mrs. R. V. Berkeley* in their catalogue this year, where it is described as "a charming new hybrid, differing from *P. pulverulenta* in having pretty creamy white flowers with orange eye." It is hardly correct to state that it is of hybrid origin, and no mention is made of it coming true from seed or otherwise. I crossed *P. p. Mrs. R. V. Berkeley* with *P. cockburniana*, and seed was only produced in a small quantity; but the reverse way gave ample seed. When both crosses flowered, many were typical *P. Unique*, while 30 per cent. or so were lighter in colour and no advance upon other Primulas in commerce. *P. Unique* crossed with *P. p. Mrs. R. V. Berkeley* gave forms of *P. Excelsior*, but none approached the scarlet *P. Excelsior*, which gained an award of merit from the Royal Horticultural Society last year.—T. W. BRISCOE

Rose Backfisch.—On page 56 of your issue of January 31, in referring to a pretty little Pompon Rose sent out by Peter Lambert of Trier that

had been christened with the apparently "cruel" name of Backfisch, I hinted there might be a reason for the label, and asked that the word might be translated for me. My old German dictionary of schoolday use had failed me, "Baked Fish" or "Fried Fish" not seeming exactly a fitting Rose title! I have not had long to wait. Several post-cards and two letters have already reached me and give me the desired information, in the form of various translations of Backfisch, and which I now hand on for the benefit of those of your readers who may have been, equally with myself, in the dark; and I take this opportunity of thanking those of my correspondents through your columns who did not give me sufficient data to do so personally. They all agree that Backfisch is a word that in this case has not been used in its literal sense; in other words, Backfisch would appear to be a slang expression. One post-card, with no other address than the London

post-mark, reads as follows: Backfisch = a female nut." A second says: "Backfisch is used as denoting a young girl not yet 'out,' and the name was probably given to the Rose before it was 'introduced'!" A third says: "I think you will find it means a half-grown schoolgirl, a boarding-school or bread-and-butter miss." But the fourth correspondent puts the matter so well and writes such a charming letter that I should like to quote his letter in full, but my modesty forbids, and I will only give you that portion dealing with Backfisch. It was addressed to "H. E. M., In a Hampshire Garden, Southampton": "Backfisch, literally brook fish, is synonymous with another very modern word, 'flapper,' both

unknown, I imagine, ten years ago, but used to describe the girl in her teens—in my youth we spoke of 'sweet seventeen.' 'Brook fish' may stand for 'salmon pink,' or something that has not yet ventured into deeper waters, or a tender plant. Hideous! but in these slangy days applicable in modern minds to the sweet little flower you describe." The moral of the above is obvious. One occasionally reads diatribes (I am not sure I have not been guilty of writing one or two myself) against the presumed ridiculous labelling of Roses and other plants with names (in other languages than our own) the meaning of which may not be quite clear to us. I admit I was nearly letting myself go over Backfisch—prudence and a sufficient knowledge of the raiser, Herr Peter Lambert, saved me; but my narrow escape in this case may very well be a lesson to others besides myself.—HERBERT E. MOLYNEUX.

Rose Mme. Edouard Herriot.—I was pleased to see the recent coloured plate of this Rose, which was certainly very good. I am looking forward to seeing it in flower in the open, for I question whether the flowers exhibited were in true form, being grown under glass. Moreover, I do not believe we shall see what Mme. Edouard Herriot can do until we have home-budded stocks, and particularly on the Briar. Past experience with French Roses, and particularly the pernetianas, convinces me that we do not see them in form until two seasons have elapsed.—T. W.

A Beautiful Winter Heath.—Erica carnea præcox rubra is one of the best of the newer varieties of E. carnea which have been selected by Mr. Richard Potter and sent out by Messrs. Backhouse of York. It comes early into flower, and affords us a number of sprays. Its name of præcox is quite borne out by its early flowering. It is a very good variety, the flowers being of a rich rose carmine, with the tips of a good, deep madder brown. When these fine Heaths become a little cheaper they will be of great value. Those of us who have a full set of the twelve varieties distributed appreciate the welcome bits of colour they give in earliest spring or even in late winter.—S. ARNOTT.

Mealy Bug on Vines.—It may interest some of your readers to know how I cleared a vinery of mealy bug. First of all, the Vines were pruned, then the cut surfaces painted with patent knotting; next, the rough bark was taken off very carefully, special care being taken round the spurs. Then the glass and woodwork had a good scrubbing and were washed down with the hose; next, the ironwork was painted with paraffin, taking care not to get it on the Vines. The walls were then thoroughly whitewashed and, lastly, the Vines painted, taking care not to miss the least portion and stopping up every little hole, but taking care of the buds. The paint was made as follows: I got some smooth clay and made it thoroughly dry, then worked it into a fine powder. I procured a pint of coal-tar, put it into a galvanised bucket, then poured on a gallon of boiling water, added a wineglassful of paraffin, and well stirred. I then added the powdered clay a little at a time, and kept it stirred till of the consistency of thick cream, and, when cold, painted the Vines as before stated. I also went carefully over the spurs on bright days, and found one or two insects; but now the Vines are thoroughly free, and I am well rewarded for the trouble that the work entailed.—S. J. S.

Rose Aviateur Blériot.—Mr. H. E. Molyneux, in referring to this climber on page 35, issue January 17, mentions that it is not a very strong grower with him. I almost wish I could say the same, for I planted a young plant three seasons back against a fence with the idea of tying the growths to a pole. As my ramblers are but 3 feet 6 inches apart, the problem with me is how to deal with the octopus-like growths of Aviateur Blériot. Not only does it send up many great basal growths, but these break at all points, the laterals running out in all directions 4 feet to 6 feet. During last autumn I cut away many of these side growths, and have since removed many thin basal growths; but as to cutting out old flowering wood, it cannot be done, for such wood is bristling with new autumn-made growths, some shoots running up 12 feet, others sprawling over into my neighbour's garden and making his path almost impassable. Aviateur Blériot is the most vicious wichuraiana I have ever had to deal

with, owing to its habit of making so many laterals. For general vigour nothing I grow approaches it, except American Pillar and Minnehaha, and as both of these are on a wall, I can deal with them. As Mr. Molyneux states, Aviateur Blériot has beautiful lasting foliage, better than nine-tenths of the wichuraianas, but it does not flower in the same way as the Dorothy Perkins type, and it is rather early. The colour in the bud is fine, but, like all yellow ramblers, it becomes nearly white in due course. From what I have seen of Shower of Gold at the shows, Aviateur Blériot is the same.—T. A.

Thatched Roofs.—With regard to the use of thatched roofs for country houses and out-buildings (see THE GARDEN for January 3, page 1, and January 17, page 31), there cannot be two opinions from an æsthetic point of view. From the window of the room in which I am writing, I have only to turn my head slightly to look upon two very old cottages, some 200 yards or more distant, with projecting porches covered with climbing plants and big front gardens. The roofs of these cottages are of real old brown thatch, which has apparently been untouched for a number of years. I can imagine the change that would be effected by the removal of the thatch and the substitution of slates. At the same time, one cannot help thinking what a home this ancient thatch offers for dust, dirt and vermin. If a new form of roofing is generally to be adopted, it would seem to be in the direction of tiles, the glaring redness of which can be considerably toned down by boiling them in oil before fixing, an operation, in my memory, that was performed with a certain amount of success some years back on a house erected at Kew. With regard to Mr. Kennaway's appeal for the preservation of thatched roofs, the *Devon and Exeter Gazette*, commenting upon it, says: "On the whole, the object of the appeal—securing picturesque—has met with sympathy, but several practical objections have been raised," which are set forward in the following extract from the *Sanitary Record and Municipal Engineering*: "We wish," it says, "it were possible for us to support the appeal, but we are regretfully obliged to admit that the objections against the use of this material greatly outweigh the advantages claimed for it, for thatch is, on sanitary grounds, a material which not only harbours vermin, but when infectious disease occurs in houses covered with it, efficient disinfection is practically impossible. Moreover, it is so highly combustible and incapable of being protected against fire that new buildings should not be covered with it. The disastrous fire at Swavesey, in Cambridgeshire, which occurred during the past year, and destroyed one-half of the cottages in the village which were covered with thatch, while those covered with incombustible material escaped, is too striking a lesson to be disregarded. We venture to hope, however, that officers of District Councils will not hasten to condemn these existing thatched cottages."—JOHN R. JACKSON, *Lympstone, Devon*.

FORTHCOMING EVENTS.

February 9.—United Horticultural Benefit and Provident Society's Committee Meeting.

February 10.—Royal Horticultural Society's Show and Annual Meeting.

February 12.—Manchester and North of England Orchid Society's Meeting.

February 13.—Beckenham Horticultural Society's Meeting.

SEASONABLE NOTES ON AURICULAS.

DURING the month of February the general routine will depend entirely upon the weather. If it is cold and frosty, little can be done; but should it keep open and mild, the plants will be very active at the roots, and in consequence must be given more water. We should now aim to keep them just moist, and try to secure that happy medium which is easily obtained by every observant cultivator. It is difficult to describe this condition, but the best advice I can give an amateur is: If in doubt about watering a plant, let it wait until the next day appointed for this purpose. With Auriculas it is not necessary to look through the plants daily at this period of the year.

Offsets.—Towards the end of the month the collection should be examined, and all offsets large enough for removal may be taken off. Some will be quite strong and possess a fair quantity of roots. These can be potted in 3-inch pots, using as a rooting medium good fibrous loam three parts, leaf-mould one part, and a moderate sprinkling of sharp sand. The pots usually selected are known as "long thumbs," and the drainage may either be broken brick rubble or ordinary potsherds, over which is placed a thin layer of loam fibre. These offsets, if given a larger receptacle later on, will make nice healthy plants for next season. Some of the smaller offsets which have no roots should be treated as cuttings by placing several round the side of a pot, and if kept close for a few weeks in a hand-light or frame, they will soon form roots, when they may be potted off in a similar mixture to that named above.

The Uselessness of Top-Dressing.—At one time it was the rule to remove about an inch or so of the top soil from around the old plants and replace it with a somewhat rich compost. I have found that this is superfluous, for no difference could be detected in plants which were top-dressed and those that were left alone. It is, however, advisable to look over all plants that were repotted last May or June, and prick over the surface soil with a pointed stick. Where any of the compost has been washed away or removed with the offsets, it should be replaced.

Cleanliness, Ventilation and Light.—The pots may be scrubbed and new labels written where necessary, while the plants will benefit if given plenty of ventilation; but cold, cutting, frosty winds must be avoided. Light is most essential at this season, and where plants are grown near large manufacturing towns and fogs are frequent, the outside glass should be washed and kept as clean as possible.

Repotting Offsets.—A few offsets will have been removed about last August, particularly from choice varieties, and if proper attention has been given they will now require a larger receptacle. When repotting, see that the woolly aphid is destroyed, and make the compost fairly firm.

Seedlings.—In most collections a few seedlings are raised, and these should be pricked off directly they have made two or three tiny leaves. Boxes or pans are best for them in the early stages, a distance of an inch or so from plant to plant being ample; but, when the foliage meets, they ought to be given separate pots. The seed-pans should not be thrown away as other seedlings will appear later on. T. W. BRISCOM.

TRANSPLANTING LARGE TREES AND SHRUBS.

A FEW weeks' work with a transplanting machine when making a new garden, or when carrying out alterations in existing pleasure grounds, moving large trees and shrubs, will produce an effect for which it would be necessary to wait fifteen or twenty years were the moving done by hand, and only plants of moderate size



1—AN EVERGREEN SHRUB WITH ROOTS AND SOIL BOUND UP READY FOR TRANSPLANTING.

used. Tall deciduous trees—Poplars, for instance—can be moved successfully without having soil adhering to the roots; but with evergreens in particular there should be good balls of soil transferred with them to their new positions. Employing a transplanting machine, rollers, planks and a low, four-wheeled trolley may be utilised, the difference being that the work takes longer with plants of considerable size, the balls of soil are generally more shaken about in hauling, and it is not so easy to place the plant upright in the centre of the new hole prepared for it.

Three sizes of transplanting machines are useful for moving balls of soil weighing from five hundredweight to eight or ten tons. A small machine manipulated by five or seven men, according to the weight of the ball, will move from a quarter to three-quarters of a ton. A machine of moderate dimensions will carry up to one and a-half tons, and requires seven to eleven men to work it. The large machine will carry balls of soil up to ten tons. The Evergreen Oak shown in Fig. 3 weighs about eight tons. The value of being able to successfully transplant large specimens thirty or more years old, such as this, will be at once recognised. The greatest value of these machines is, of course, with evergreens, as these, taken as a whole, are

slower in growth than deciduous trees. There will not be sufficient work for one or more of these machines in a garden of fair dimensions; but when new work or alterations on a considerable scale are contemplated, it is worth while calling in the help of a firm who use these machines, or hiring the machines from them for a few weeks.

Having decided on the size of the ball of soil necessary to transplant a certain specimen satisfactorily, the ground must be marked out and a trench 1 foot wide dug all round the ball. Square balls with rounded corners are the easiest to manipulate with a machine. The depth to dig down will depend on the size of the specimen and the quantity of roots, varying from 1½ feet to 3 feet or slightly more. To hold the soil together, a piece of canvas should be bound round the ball with thick cord and held in position by a few narrow boards, which can be seen placed in position round the balls of the plants illustrated. In the process of moving, any roots damaged must be cut off clean. If larger than a pencil, the cut surface should be tarred over to prevent fungus starting decay. However carefully large specimens are transplanted, in digging round the ball the plant will lose some roots, so to balance this a number of the branches and twigs should be cut out. Make a basin with soil round each specimen as soon as it is planted, and water thoroughly, unless the weather is frosty.

Fig. 1 shows a bushy evergreen tied up and prepared ready to lift

with a transplanting machine. The wheels stand on the planks placed in position at the sides. The two large ropes are seen placed round the two lifting planks under the ball, the four ends being fastened round rollers on the machine. Fig. 2 is a large tree ready for moving on planks and rollers. The wooden rollers run on the two stout planks placed on the ground. One side of the ball is seen lifted with a jack, ready to place the rollers underneath the ball. The tree is hauled by men with a pulley up the planks on to a low trolley, or, if the distance is short, the specimen may be rolled on planks the whole way. Fig. 3 shows an Evergreen Oak weighing about eight tons, slung on one of Barron's transplanting machines, ready for the horses to draw to a new station. Even larger trees may be transplanted in this way. A. O.

THE FIG AND ITS CULTIVATION.

FROM time immemorial the Fig has been considered a fruit worthy of notice and cultivation. It is a native of Mediterranean regions, and flourishes equally well in Southern Europe, Northern Africa and Western Asia.

Records show that this valuable fruit was introduced into England from Italy early in the sixteenth century by Cardinal Pole and planted in the grounds of Lambeth Palace, where possibly its descendants are still extant. This fruit cannot be said to actually flourish in England generally, although in certain places on the South Coast there are instances of standard Fig trees bearing good supplies of fruit. It has been found necessary, therefore, to protect trees growing out of doors further North, and away from the soothing influence of sea breezes, from the ravages of frost and cold, so they may be regarded as wall fruit.

Propagation.—This may be carried out in several ways, but the methods most generally used are layering, making cuttings or using suckers. In the case of the last mentioned, the wood is sometimes very soft, so it cannot be so highly recommended as either of the others. For cuttings, short-jointed, well-ripened wood should be used and placed in a cold frame free from frost until early spring, when they may be introduced into a brisk heat. Roots will soon be forthcoming, and the usual treatment will then suffice. The practice of layering is convenient, for quite a large branch may be so treated, and therefore a good-sized tree obtained with little trouble. The other means of increase are by seeds, root-cuttings and by grafting, but they are little used.



2—A LARGE TREE READY FOR MOVING BY MEANS OF PLANKS AND ROLLERS.

Cultivation.—With regard to outdoor treatment, the wall chosen for the plants should have, if possible, a southern or south-western aspect, but they may also be grown in an eastern position. The essential factor in the preparation of the soil is perfect drainage. In preparing quarters for fresh trees, the condition of the subsoil should be ascertained, and if cold and retentive, plenty of broken bricks and old mortar rubble should be introduced at the bottom of the trench, which need only be 30 inches deep. In order to check too rampant a growth, it will be found best to mix ordinary garden soil with new loam, making the whole firm as the work proceeds, and continuing to use a goodly share of lime rubble in the compost. A brick partition should be built round the trench at a distance of about two feet from the wall, to assist in preventing the roots from growing too freely. In cold districts the Fig is decidedly better for some protection during the most severe weather. The branches need only be covered with mats just nailed over them during very sharp frosts, but the roots must be covered during the whole of the cold season with a liberal dressing of half-decayed manure, and this should be covered with slates when heavy rains are frequent, as everything depends upon keeping the roots warm and fairly dry. Successful under-glass culture is comparatively easy of attainment, provided one or two practical points are kept in view. (a) The root-run must be restricted and the compost should be only moderately rich to begin with; (b) the border must be made quite firm and (c) the drainage must at all times be in perfect condition. Excellent results may be obtained also from growing in pots and tubs.

Pruning.—For outdoor culture this chiefly consists in cutting away right from the base weak and unnecessary wood. While an effort should be made to retain the main branches, as much good wood as possible should be encouraged yearly from the base, and this should be allowed to grow unchecked throughout the season. The system adopted under glass must necessarily be more orthodox. Assuming the house to be liberally covered with branches, the young wood must be pinched at the fourth or fifth leaf, and all unnecessary shoots pulled off, as overcrowding of the wood is fatal to good Fig culture.

Watering must always be carried out most judiciously, and unless the grower is sure that his border (or other receptacle) is efficiently drained, it will be found safer to apply too little rather than too much, especially during the early stages of growth.

Pests.—The most troublesome are red spider and mealy bug. A free use of the syringe will do much to keep the former in check, but for mealy bug it is best to dress the trees while in a dormant state with some approved insecticide.

Varieties.—For outdoor culture the best is Brown Turkey, while White Marseilles and Angelique also do well. (The latter should have a south wall.) For growing under glass, Brown Turkey is difficult to beat and should be included in every collection. Others to be noted are White Marseilles, Angelique (very early forcer), Black Ischia (early), Monaco Bianco (midseason), Colli-Signora Bianca, Agen (late), and Negro Largo (suitable for tubs or pots).

Planting may be carried out under glass any time between October and March; out of doors, early in the autumn or during February or March.

H. TURNER.

Serlby Hall Gardens, Bawtry, Yorks.

SELECTION OF VEGETABLE SEEDS.

I SHOULD like to supplement the excellent selection of varieties given by Mr. Beckett on page 15, January 3 issue. Now that there are so many varieties to choose from in almost all sections, it is bewildering to the inexperienced to select the best. Some growers for exhibition may say all varieties suitable for that purpose are also the best for daily use. That may be quite correct under ordinary treatment, but when grown under exhibition methods the conditions are altered.

Broad Beans.—Longpod for general growth and Mammoth for exhibition are all that is required.

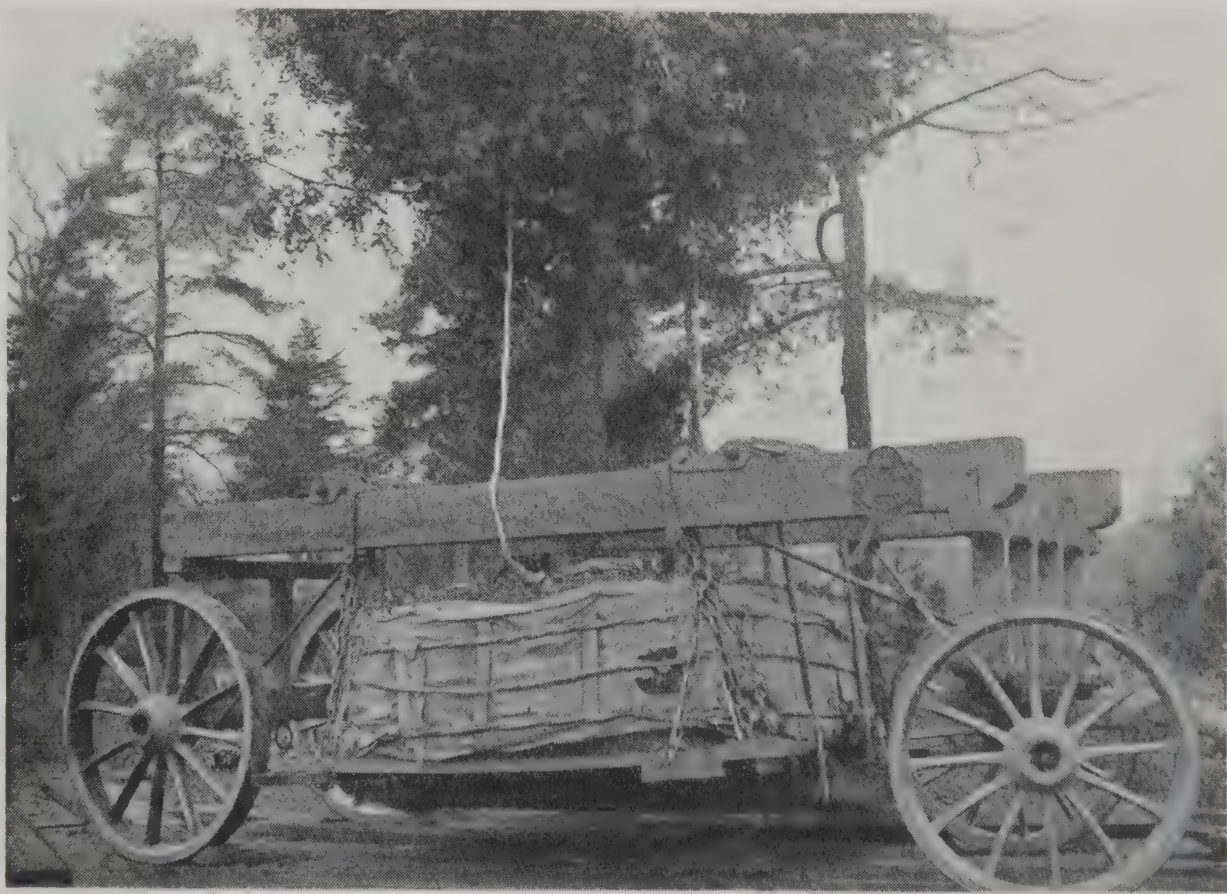
French or Kidney Beans.—For forcing early in pots or pits Sutton's Forcing is a rapid-growing Bean, and Osborne's is still a desirable variety, with Ne Plus Ultra. For summer growth in the

I prefer a smaller type like Scrymger's Giant and Imported, which give abundance of hard, button-like sprouts, so much more preferable for table than the Cabbage-like article often favoured on the show table.

Borecole or Kale has become an important vegetable, adding variety and giving huge crops. Of the large, curly type Sutton's Ar is desirable, but for a constant supply through the winter and early spring, when green vegetables are not over-abundant, I prefer the true Labrador Kale.

Cauliflowers are an important crop. For sowing indoors Early Forcing and Snowball are reliable, with Autumn Giant as the best for ordinary summer cultivation.

Cabbage.—For an early supply Early Rainham, Sutton's Earliest and Little Gem, with Wheeler's Imperial and Enfield Market for a late supply. If more variety is required, Sutton's April and Flower of Spring are excellent for August sowing, to come in as a succession between the earliest



3.—AN EVERGREEN OAK, WEIGHING ABOUT EIGHT TONS, SLUNG ON A LARGE MACHINE READY FOR TRANSIT.

open Superlative and Masterpiece are both good sorts of a larger type. Climbing French Beans are useful, as they continue to bear for a long time and may be employed to blot out an unsightly object, as they grow 6 feet high. Earliest of All and Epicure are desirable sorts.

Runner Beans can now, with careful cultivation, be had in July, and continue right up to the end of October. Ar, Hackwood Park and Best of All are good sorts in addition to that mentioned by Mr. Beckett.

Broccoli.—Carter's Autumn for an early supply, followed by Self-protecting, Leamington, Knight's Protecting and Late Queen for the latest, are ample, with the addition of Purple Sprouting, which gives added variety and lasts a considerable time without running to seed.

Brussels Sprouts are such an important winter vegetable that the best should be obtained. Where larger sprouts are required for exhibition, Matchless and Exhibition are superior. For home use

and late. Savoy Earliest of All comes in very quickly, almost too much so. Reliance and Dwarf Green Curled are suitable for small gardens.

Carrots are indispensable. Champion Scarlet Horn and Early Gem for sowing in frames, with Scarlet Intermediate for larger outdoor growth, or for exhibition early or late. Where extra heavy crops are required, combining them with a supply for cattle as well as for the kitchen, Long Red Surrey should be grown.

Celery.—Sulham Prize Pink and Superb White are two desirable varieties for ordinary cultivation.

Cucumbers are well represented by a good form of Telegraph for ordinary use, or Every Day or Delicacy for exhibition.

Leeks.—The best variety for exhibition is Improved Lyon. If, however, Leeks are only required in an ordinary way, Musselburgh is desirable.

Vegetable Marrows.—Tender and True of the bush class type is good, and so is Long White

Table Dainty in the coloured section is excellent. Pen-y-byd is very productive, with almost globular fruit, creamy white in colour. This variety requires but little space, therefore is valuable.

Onions.—For exhibition in June and July White Leviathan is desirable. For August and onwards Ailsa Craig is superior to any other. For home use Giant Rocca matures early. For autumn, winter and spring Maincrop is a superior variety. For pickling, if anything is wanted beyond the small bulbs of the last named, Improved Queen and Small Paris Silver Skin should be chosen.

Tomatoes.—The best red variety for exhibition is Perfection, and for general use out of doors Up to Date is decidedly good. Winter Beauty is a good winter-fruited variety. In yellow-skinned sorts Golden Nugget, Golden Perfection, and for the open wall Carter's Golden Sunrise and Green-gage are desirable.

Potatoes.—For early use Veitch's Early Ashleaf, Sharpe's Victor, Duke of York and Sir John

variety, produces large Peas of excellent flavour, and is almost immune from mildew.

Lettuce.—Of Cos varieties for summer use Mammoth White, Superb White and Dwarf Perfection are good. For winter growth Black-seeded Bath, Champion Brown and Winter White are to be depended upon for a constant supply. Of Cabbage varieties Favourite, Commodore Nutt, Heartwell and Ideal, with Golden Ball if more variety is required, are all desirable. Marvel, All the Year Round and Hammer-smith Hardy Green are good for autumn sowing.

Swanmore Park, Hampshire. E. MOLYNEUX.

A BEAUTIFUL KNOTWEED FOR THE ROCK GARDEN.

POLYGONUM AFFINE.

THE genus Polygonum is a most variable one. Some of the species are imposing giants, like *P. baldschuanicum*, the beautiful rampant climber

HINTS ON GROWING ANNUAL FLOWERS.

TO many readers of THE GARDEN the lengthening days will bring serious thoughts of preparation for future floral display. In the majority of gardens, no matter the size, annuals are now deservedly grown. They serve many useful purposes, as, for instance, in a new garden to which one may have recently removed, a quite luxuriant and beautiful display can be secured even the first season; or they are serviceable in filling gaps during the growth of more permanent inhabitants. But, however used, their value is undoubtedly great. According to taste, some may prefer masses or beds of annuals, while others like to scatter them as specimen plants among their border perennials. Both methods are good, the former in the larger and the latter in small gardens; or the two plans may be judiciously employed, and fine results accrue. It may be

that some rather under-estimate the true value of annuals owing to their small cost, and treat them accordingly, while to others this is an important advantage. Many of our most glorious annuals are, however, quite cheap, and it is hoped that any who read these lines and who have not done so will try a few of the varieties which will be enumerated.

Preparing the Soil.—In gardens where digging has not been completed, this should be pushed forward in all open weather, especially on heavy land. Whether light or heavy, however, expenditure of the labour incidental to "double digging" will be amply repaid in the quality of the blooms and the length of their flowering. If clayey, the soil should have a liberal supply of horse-manure well mixed in—country road sweepings are useful—and the top left in rough ridges for the frost to penetrate. Light soils can be dug in February and March, and some cow or pig manure well incorporated. A dusting of old soot and bone-meal put on in spring will be found beneficial on all

soils. An exception to this general application of manure occurs in the case of Nasturtiums, which make much leaf growth in rich soil at the expense of flowers.

Selection of Varieties.—After the preparation of the ground comes the consideration of varieties, and as the amateur is apt to be at a loss when given a multitude of names, in the following selection will be found some of the finest hardy kinds of proved merit, easily grown and floriferous: Sweet Peas are best grown by themselves. Shirley Poppies are good either massed or dotted about. Thinned to 12 inches apart and each plant staked, they do well almost anywhere, and will be found to be worth a little care. To make the cut flowers last, gather them when opening in the early morning, place the stalks immediately in half an inch of boiling water for two minutes, then transfer them to cold water. They will then keep well for some days. *Nigella damascena* Miss Jekyll, *Coreopsis tinctoria*,



POLYGONUM AFFINE IN THE WISLEY ROCK GARDEN.

Llewelyn are desirable as second earlies. Webb's New Guardian is a reliable cropper, and so are Sutton's Satisfaction and Abundance. For late use Dalhousie is reliable. Of newer sorts, several of the pedigree seedlings introduced by Messrs. Sutton are desirable. As a second early I can recommend Stirling Castle as an extraordinary cropper of capital quality, and Edinburgh Castle, Balmoral Castle and Dover Castle as a succession.

Peas.—When three seed firms catalogue 151, 100 and 89 varieties, there is small wonder if the inexperienced person finds a difficulty in making a selection. For early sowing Early Giant, Pioneer, Early Morn, The Pilot and Edwin Beckett. For general use as second earlies Masterpiece, Webb's New Kaiser and Alderman are difficult to beat. For the latest supplies The Gladstone, Ne Plus Ultra, Latest of All and Goldfinder are not excelled. The latter, although a short-podded

from Bokhara, while others are of low trailing habit, spreading naturally over rocks and boulders. It is to the latter group that *P. affine* belongs. It does not attain more than 6 inches in height, and its spreading mass of deep green foliage makes it a capital plant for clothing rocks, while it may also be used with charming effect as a substitute for the Periwinkle to cover banks or low tree stumps. Moreover, it is very free-flowering, for in late summer it produces a wealth of rosy crimson flower-spikes. In the accompanying illustration Polygonum affine is shown growing with remarkable freedom in the Royal Horticultural Society's new rock garden at Wisley. It is a native of the Himalayas, and so hardy is it in constitution that, once established in a garden, no fears need be entertained about its future except that it will need to be kept within bounds, for it is apt to spread too readily.

Sweet Sultan, Godetias Lady Albemarle and Duchess of Albany, Clarkia Salmon Queen and Chrysanthemum coronarium tricolor. For mixing in bunches: Gypsophila elegans grandiflora alba and Eragrostis elegans (Love Grass). For climbing purposes: Tropæolum canariense (Canary Creeper) or T. lobbianum and Convolvulus major (Morning Glory). For edging: Virginian Stock, Candytuft and Sweet Alyssum. For perfume: Matthiola bicornis (Night-scented Stock); sow pinches of seed in out-of-the-way corners at intervals during the season. The foregoing can all be openly sown, and, except the varieties named for special uses, are of medium height. In a future article some of the best half-hardy annuals will claim attention. B. W. LEWIS.

NOTES ON CHRYSANTHEMUMS.

It is many years since the blooms of these plants were as scarce, and consequently as much appreciated, as they were during the Christmas season.

Owing to the mild weather, which brought on other kinds of flowers very quickly as well as some of the late-flowering Chrysanthemums, and then the spell of severe weather abroad, blooms were at a premium. Such a condition may not obtain again for many years; but whether it does or not, cultivators will be wise if they include in their collections good batches of late-flowering varieties. Amateur cultivators should

Propagate the Main Batch of Cuttings Now.—Much use can be made of the garden frame, in which the young plants will do nicely. Being practically hardy, a few mats will protect them from frosts. Plants intended for exhibition purposes should be propagated singly in small pots, but all others will do well if several cuttings are inserted in a 3-inch pot. If this is done, valuable space at this season will be saved.

Potting Rooted Cuttings.—It is very rare indeed that all the cuttings inserted at the same time will be ready for potting on the same date. Some are stronger-growing varieties than others, and the cuttings of these, if not too sappy, will form roots and be ready for potting about a week before the weaker-growing sorts. Every young plant must possess a nice lot of roots; it is then fit to repot. If left too long in the small pot it becomes stunted and the stem hardens unduly. It is owing to such a check that one often finds plants with thin stems about 6 inches above the pot and thicker higher up. Keep all young plants growing steadily and well up to the light; if grown in a greenhouse, place them on shelves.

Rooting Border Varieties.—Early in February put in the cuttings of the border

varieties. Shallow boxes may be used. Put in a thin layer of well-rotted manure, then a good compost surfaced with sand. Insert the cuttings 2 inches apart, water, and shade from bright sunshine. The cuttings will form roots in about twenty days if the boxes are placed just above the hot-water pipes, and in a month if accommodated in a cool frame.

AVON.

CANARINA CAMPANULATA.

ALTHOUGH seldom seen in cultivation, Canarina campanulata is a beautiful greenhouse plant



AN ATTRACTIVE GREENHOUSE PLANT, CANARINA CAMPANULATA, NATIVE OF THE CANARY ISLANDS.

of comparatively easy culture. It is named Canarina from its habitat, being a native of the Canary Islands, while the specific name obviously refers to the large, bell-shaped flowers that are rather sparsely produced from January to March. The drooping flowers vary in colour, but are usually of an orange hue and netted with red veins. The plant is of a semi-climbing habit, not free enough to train to the rafters of a greenhouse, but it may well be trained around stakes about two feet in height. A compost of loam, leaf-mould and silver sand makes a suitable rooting medium. It is increased by division at the time

of repotting, that is, usually, in December, or by young cuttings taken in the spring and inserted in sand in a warm propagating-case.

THE HERBACEOUS OR MIXED BORDER.

HOW TO MAKE AND MAINTAIN IT.

(Concluded from page 60.)

Borders of One Colour.—Touching on one-colour gardens, the authoress of a recent volume on herbaceous plants states she has never seen one that gave her satisfaction. That in general is perhaps too sweeping a statement. To a great extent it is, however, true, and unless the composer is absolutely sure of the colours of the various plants, and also their disabilities as mere plants, as well as their strong points, one-colour schemes are assuredly speculative. The least difficult, which is equivalent to saying the colours harmonise best, are yellows running from cream to dark brown, and pinks to crimson, blues being the least satisfactory, probably on account of the sparsity of plants to choose from. A very charming composition is effected with yellow and white, being careful to reject dead whites and choosing yellowish and greenish whites. The past season I introduced deep pink among yellow, with which it goes very well. Another combination of a few simple colours that is very satisfying is of mauve, violet and pink to rose salmon. White and mauve of varying depths of tone are also worth trying. But it must be understood that in each and every one of these the range of plants is limited, not so much because the number of species or varieties is few, but because one must be sure of the proper shades, and wherever or whenever it happens that one or more plants of a wrong note are introduced, then removal and substitution must take place as soon as the mistake shows itself. On the whole, for general purposes a mixture of colours is to be preferred,

and more particularly for borders which are kept gay for a long period. In these it is possible to plant so that special colours may give a character to the border at different times—the Daffodil season, yellow; Delphiniums, blue; Asters, grey. A

Study of Floral Colours shows that strength is essential, especially in blues. The blue of Cornflower at a distance fades to grey, and lovely as is the blue of Endive and Succory, the general effect is the same or a little less pronounced. Therefore, to secure a telling blue effect in a large border, that of Aconitum autumnale and Larkspur

should be chosen in preference to true blues. Two of our borders were planted with various mauve plants last season, with lavender and single blue Asters to give tone. Both the last named failed, and the effect was rather dull. The new lavender East Lothian Stock would have been better than either of these. In pinks it hardly matters how faint the shade may be. They are always effective, but to get the desired effect at a distance it is essential to employ a deeper tone, though there is a danger of happening on magenta. *Lilium tigrinum*, *splendens* especially, affords a nice effect which attracts the eye. Orange African Marigold is also valuable, and an even deeper tone is given by *Montbretia Vulcan*, one of the best for border decoration and almost similar in colour to *Helc-nium macrocephalum cupreum*. *Tithonia speciosa*, if not so shy to flower, would be an invaluable plant, deeper in colour than any of the above. For scarlet we can go to Dahlias, to Carnations, Pentstemons, Gladioli, *Gilia coronopifolia*, *Antirrhinums* and Phloxes for the very best. Phloxes are also valuable for violet and plum colours.

In Arranging Colours it is not unusual to employ white to deaden the jar incident to two or more colours clashing. It is a simple expedient, but not to be generally commended. It is very much better to work out schemes in which white need be used only for its intrinsic value, the number of plants available for colour contrasts and harmonies being far beyond the requirements of any garden. White in conjunction with blue of all shades is much to be preferred to white with reds. Cream goes very well with blue, and a few years ago I had the common Gardener's Garters run through clumps of *Salvia patens*, which found many admirers. In arranging clumps for effect, one should always endeavour to get the best. Tiger Lilies, for example, are sometimes arranged with white and with red. But the best effect is derived from brown, which is secured by a good strain of French Marigolds, some of which are a dark mahogany.

Other Combinations of the greatest value are those of plants of one colour, but of different habits and heights. Thus, *Ageratum mexicanum*, either dwarf or tall, goes well with a Larkspur of the same shade, also with *Statice incana*, also mauve. I had last season dwarf *Ageratum* with *Aster Amellus bessarabicus*, and in other colours there are very many plants which are equally desirable arranged together. It must be understood that these combinations are not simply for bedding effects, but parts of the floral arrangement of ordinary mixed borders. Another very charming plant not nearly so much used as its merits deserve is *Verbena venosa*. Not only is the colour—violet—good, but the habit of the plant gives it an additional value for mixing

with other plants taller than itself or of equal height. With mauve it is very pretty, but better with deep rose or light salmon. It is easily raised from seeds, which sometimes lie a long time before they germinate, and also by means of root cuttings, while in many parts of the country it comes through the majority of winters with the help of a little surface protection.

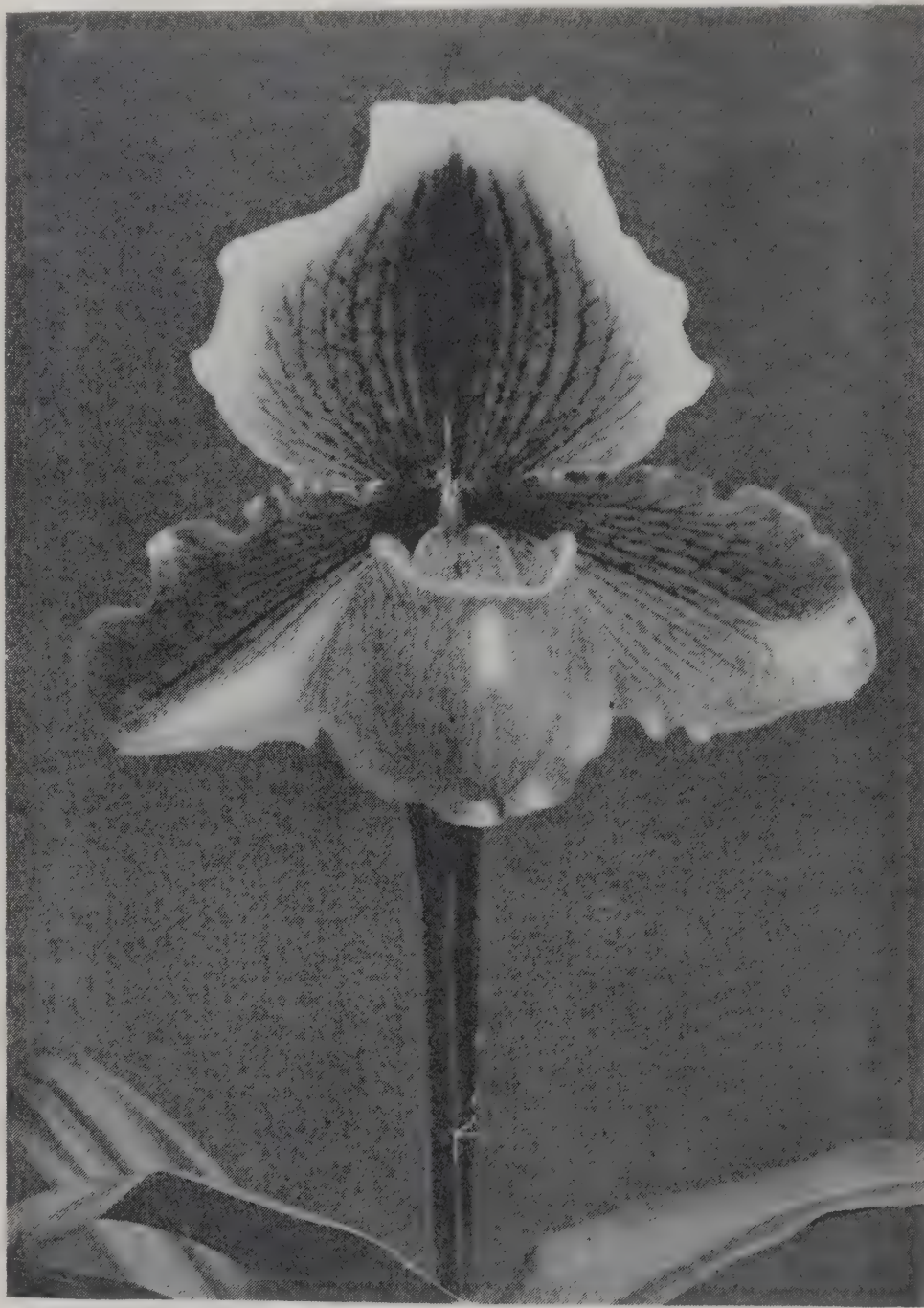
The writers who ridicule the custom of using the same plants or colours over and over again in a border have never discovered how an extensive border is to be well furnished by any other means. Nor is there any need to limit that style of planting, provided the same plants are

give an effect which dwarfier plants fail to give. Some years ago I had pure white, and the effect was, as one gentleman said, bordering on the unreal. *Rose Queen* is also a thoroughly effective variety, and if one could be certain that singles would come true from seed, there would be the loveliest effects conceivable by planting in this way. I have already mentioned

Sweet Peas as a backing for mixed borders, and these in selected colours may be used in those, with another backing trained pillar fashion and near the back, with very good effect. Only it is essential the colours be carefully chosen so that they do not clash with the scheme in general. A plant of *Tropæolum aduncum* run through the Sweet Peas may be permitted; the flowers brighten up the pillars exceedingly. In conclusion, be chary to admit any plant the merits of which have to be discovered. "None but the best," no matter how common they are in colour and habit, must be the motto. Have new combinations every year to ensure the interest of a jaded constituency; cultivate the soil in the most thorough manner; weed out undesirables as they make themselves known for what they are, and replace with better; and never be ashamed to ask advice from those whose colour sense is better educated than your own.

R. P. BROTHERSTON.

Tyninghame, Prestonkirk, N.B.



CYPRIPEDIUM DESDEMONA, A NEW AND BOLD VARIETY WITH A BROAD DORSAL SEPAL AND WAVY WINGS.

NEW ORCHIDS.

ONE of the most striking novelties at the exhibition of the Royal Horticultural Society held on January 27 was the new *Cypripedium* named *Desdemona*, shown by Messrs. Charlesworth and Co., Hayward's Heath. One plant only was shown, carrying a massive flower the general colour of which was a bronzy green. The raisers of new *Cypripediums* aim to procure flowers with ever-increasing breadth in the dorsal or hood, and this character is very pronounced in the variety *Desdemona*, which was granted an award of merit. In this variety the dorsal has a white, undulated margin, while deep chocolate markings over a groundwork of amber and green occupy the centre. Messrs. J. and A. McBean of Cooks-

bridge gained the high award of a first-class certificate for a lovely variety of *Cattleya* Tityus named A. McBean. The variety was a great improvement on the type, both in colour and form. Mrs. Norman Cookson, Oakwood, Wylam, gained two awards of merit for *Odontiodas* with the varieties *Doris* and *Sibyl*, these being the pick of an excellent collection, in which the rich colour tones of the densely marked flowers blended in perfect harmony.

On this occasion no awards for novelties were made by the floral committee of the Royal Horticultural Society.

arranged differently and with other combinations. Some plants may be used in every little gap without giving the least feeling of sameness. Such are tall *Antirrhinums* of a colour that goes well with the majority of the other plants, yellow, crimson and yellow, and white for preference. *Lobelia cardinalis* and Stock-flowered Larkspurs are others; and if one desired a pronounced blue effect, there is nothing better than the double blue form of the last named planted here and there all over the border. A special colour in Hollyhocks if run through the border is also valuable, and more so because the tall spikes

GARDENING FOR BEGINNERS.

FLOWERING SHRUBS FOR SMALL GARDENS.

FOLLOWING my article which appeared on page 601 of November 29, 1913, issue, I give herewith another dozen shrubs suitable for small gardens.

Cytisus præcox.—Some people object to this on account of the somewhat disagreeable smell of its cream-coloured flowers. But it blooms so freely and grows so luxuriantly that it should be included in all shrubberies. It blossoms in May, and can be grown nearly anywhere and in the poorest soil.

Syringa vulgaris Souv. de Louis Spæth is one of the best of the garden Lilacs. It grows quite 2 feet high if planted in good, loamy soil, and bears immense heads of reddish flowers in May. All sucker growths must be removed from the base.

Syringa persica.—Everyone who sees this shrub wishes to plant it. It is a miniature Lilac growing from 2 feet to 4 feet high, with an ample system of slender branches, which bear a profusion of elegant panicles of fragrant, lilac-coloured flowers in May. Plant in ordinary loamy soil and do no regular pruning.

Sophora viciifolia is a new Chinese shrub which grows at least 6 feet or 8 feet high, producing dainty, pinnate leaves and white, violet-shaded, Pea-shaped flowers in June. It must be given good, loamy soil, have no root disturbance, and receive no regular pruning.

Cydonia Maulei superba is a very rich coloured Japanese Quince. It forms a bush of spreading outline 6 feet or so high. The flowers are rich red in colour, and mature during March and April. If planted in ordinary good garden soil, it gives no trouble and requires no pruning.

Philadelphus Lemoinei erectus may be considered one of the best of the dwarf Mock Oranges. When planted in rich, loamy soil it forms shoots 2 feet to 3 feet long in a single season, which bear fragrant, white flowers from almost every leaf-axil in June. As soon as the flowers fade, all flowering shoots must be cut away to allow young ones to grow from near the ground.

Escallonia philippiana is the hardiest of the Escallonias. It forms a deciduous bush about three feet high, and bears a profusion of white, Pea-shaped flowers in July. Ordinary good garden soil suits it, and no regular pruning is necessary.

Berberis stenophylla.—Perhaps if any one shrub is more generally useful than another, it is this, for it is a good evergreen and a first-rate flowering shrub. In ordinary garden soil it grows to a bush 6 feet to 8 feet high, with a very wide spread, and is useful as a specimen bush and as an occupant of the shrubbery. It stands pruning well, and is sometimes used for hedges. No regular pruning is necessary. It must be placed in a permanent position while quite small. The fragrant, golden blossoms are borne in profusion in April and May.

Hypericum moserianum is a dwarf St. John's Wort of hybrid origin. It grows from 12 inches to 15 inches high, and bears large, golden blossoms during the summer and autumn. Plant in good, loamy soil, and cut back and thin out the branches in spring.

Robinia hispida inermis is the best form of the Rose Acacia, an American shrub with bunches of rose-coloured, Pea-shaped flowers which mature in June. Planted in loamy soil it grows well and blossoms each year. It must not be exposed to rough winds, and does not require pruning.

Ceanothus Gloire de Versailles.—Of the numerous kinds of summer and autumn flowering Ceanothuses this is one of the best, for its large panicles of blue flowers are borne continuously from July to November if the weather continues

generally grown in a greenhouse. It is mainly a question of the proper preparation of the plants several months before they are required for the actual work of planting.

Suitable Plants for the Purpose.—Bougainvilleas, Plumbagos, Palms, Fuchsias, Cannas, Swainsonas, Fatsia japonica, Dracæna indivisa, and Heliotrope. Small plants are not of much use; they must be pyramid-shaped, half standards or standards, with main single stems for preference.

Repotting.—A compost of fibrous loam, leaf-soil, rotted manure and sand will do nicely. This must be made firm when potting is being carried out. Fuchsias should be started in the same way and receive a pruning; but when the young shoots are an inch long the plants must be turned



CYTISUS PRÆCOX, A MAY-FLOWERING BROOM SUITABLE FOR A SMALL GARDEN.

mild. In the open it grows about four feet high, and against a wall three times that height. It must not be planted in very cold places. Ordinary garden soil suits it, and the branches must be cut back fairly hard in February each year.

Cotoneaster rotundifolia.—This Himalayan shrub is not planted for the sake of its flowers, but for its bright red fruits, which ripen in September and hang until spring. It forms a bush 3 feet to 4 feet high if planted in ordinary garden soil, and does not require pruning.

It will be noted that Rhododendrons, Heaths and other shrubs of a like character have been omitted. The omission is due to their unsuitability for soil containing lime.

PREPARING GREENHOUSE PLANTS FOR BEDDING.

In sheltered positions in the flower garden charming effects may be secured by using plant

out of the pots and the old ball of soil much reduced, so that the cultivator may be able to place the roots in a smaller pot, as it will be necessary to repot these plants into larger pots once prior to planting them out.

The roots of Cannas must now be placed in gentle heat to induce a steady, sturdy growth. When all have made good progress, gradual hardening must be commenced at the end of April, so that all will be in a fit condition to transfer to the flower garden the first week in June.

Plants from Seeds.—Seeds of Zea japonica variegata, Ricinus Gibsonii (Castor Oil Plant) Centaureas, Nicotiana affinis, N. Sanderae, and others possessing fine foliage, should be sown, and the resultant seedlings grown on in a rich compost. They must be grown to possess large well-coloured leaves, and to this end avoid any check to growth, and very carefully harden the plants so as to retain the lower leaves. Avo

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Figs in Pots.—Trees that were started into growth early in December will now be sufficiently advanced to benefit by frequent applications of manure-water from the farmyard. Fig trees require a large quantity of moisture at the roots during the growing season, and, when this is applied, sufficient should be given to moisten the soil to the drainage.

Cucumbers.—If seeds were sown at the beginning of the year, the plants should now be ready to put out. Let the house be thoroughly cleaned and the walls whitewashed with hot lime. A hot-bed of leaves and stable litter may then be made up and small mounds of soil placed 4 feet apart on the surface of the bed, which, when finished, should be within 18 inches of the trellis.

Tomatoes.—Plants raised in October and wintered near the glass in 6-inch pots should now be showing flower and ready for their final potting. Ten-inch pots are best for the purpose. The soil may consist of three parts turfy loam and the remainder of leaf-soil. Another sowing may be made now for succession. The first day of March is quite early enough to sow seeds of approved open-air varieties.

Pot Vines.—Early pot Vines will now have set their fruits, and will require careful treatment. Top-dress the pots with loam and cow-manure, and give frequent waterings of liquid manure from the farmyard; but care must be taken that this is not too strong, or the young roots may suffer in consequence. Six medium-sized bunches will be sufficient for each Vine to carry, and these should be distributed evenly over the Vine. Stop the strongest shoots at the second leaf beyond the bunch, in order to give the bunches near the bottom of the trellis a chance to develop. A temperature of 70° at night and 85° by day with sun-heat will suit them well.

Plants Under Glass.

Amaryllis Bulbs intended for flowering during the spring and early summer should be examined, the old soil carefully removed, and the bulbs potted in a compost of light, turfy loam and old lime rubble. Make the soil moderately firm in clean, well-crooked pots. If required, the first batch may be placed in gentle bottom-heat at once to start them into growth. Overpotting must be avoided, as they flower quite freely in 6-inch or 7-inch pots, and are better suited for decoration.

Chrysanthemums.—The earliest batch of cuttings should now be potted into 4-inch pots and placed on a bed of fine sifted ashes quite near the roof glass. A brick pit where gentle fire-heat can be applied in times of sharp frost will suit them very well; but this artificial heat must be avoided as far as possible, as any forcing of the plants into growth now is almost certain to have a detrimental effect on them later in the season. Avoid overcrowding, and ventilate the pit freely as soon as the plants have made new roots. Water with great care, and never until the soil is dry, when a good soaking should be given.

Gloxinias.—The largest of the old tubers should now be shaken out of the soil and placed in shallow pans or boxes. Cover lightly with fine sandy soil, and, when sufficient growth has been made, the tubers may be potted into their flowering pots, which should be quite clean and well crooked.

Seed-Sowing.—Seeds should now be sown of Begonias, Gloxinias, Amaryllis, Clerodendrons, Celosias, Coleus, Grevilleas and Eucalyptus. Fine sifted soil composed of sandy loam and decayed leaves in equal parts should be used. Cover the seeds lightly and protect with sheets of glass in a temperature of 70°.

The Flower Garden.

Seed-Sowing.—Various seeds should be sown now, which include Antirrhinums, Dianthus, Carnations, Pentstemons, Aquilegias and Begonias. All these should be sown in gentle heat, with the exception of Begonias, which should be placed in a temperature of 65°.

Rhododendrons and Azaleas in permanent beds should receive a top-dressing of decayed cow-manure, turfy loam and peat in equal parts before the season is too far advanced. These are surface-rooting plants, and should never be disturbed by forking the soil. The surface may be lightly raked over with an iron rake previous to applying the surface-dressing, which should be made tight by treading while dry.

The Hardy Fruit Garden.

Bush Fruit.—If not already done, the pruning of all bush fruit trees should be finished as soon as possible. Newly planted trees may be cut hard back, in order to shape them for another year. With regard to dessert Gooseberries, the trees should be well thinned out, and, where the spurs are too numerous, every second spur may be removed, in order to admit light and air to the centre of the tree and render the gathering of the fruit less difficult. All side shoots of Red and White Currants may be pruned to two or three buds from the main branch, leaving the leading shoot 8 inches or 9 inches long. Black Currants require a different method of pruning. As most of the fruit is borne on the young wood, let the trees be well thinned by removing as much of the old wood as can be spared, and encourage the strong, young growths from the base, which may be left unpruned.

The Kitchen Garden.

Chicory.—This valuable winter salad is easily forced. The roots may be placed in any dark chamber with a temperature of 60°. If only a small supply is necessary, the roots may be placed close together in 7-inch pots. If watered well when potted, no more moisture will be necessary, and the crop should be ready to cut within three weeks.

Rhubarb Roots may be lifted and put in gentle heat. Any place with a temperature of 50° will answer the purpose. If fresh plantations are necessary for the purpose of producing crowns for forcing, the ground should be trenched and a good dressing of manure given. Plant in rows 5 feet apart and 3 feet in the row.

Horse-Radish.—The present is the best time to make plantations of Horse-radish in deep, rich soil. Trench the ground and give a good dressing of decayed manure.

Royal Gardens, Windsor. JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Rhubarb may now be safely planted, and in doing so see that the ground has received a liberal supply of good farmyard manure. Select the strongest crowns, and allow plenty of room between the rows, finishing by giving the ground a good mulching of stable litter.

Potatoes for Seed.—Go over the Potatoes intended for seed and box the varieties for sprouting. Too much importance cannot be attached to this practice, as it adds materially to the quality and yield. The boxes of tubers should be kept in a cool, airy place where they will be safe from frost. There seem to be conflicting opinions as to whether the seed should be changed each year or not. If one is careful that the seed selected is true to the type and changed to different parts of the garden, I see no reason why seed should not last for a year or two.

Brussels Sprouts.—Where Brussels Sprouts are required for September, either for exhibition or for ordinary kitchen use, a small sowing may now be made in a cutting-box and placed in a cold frame.

Mint.—Several roots of Mint may be lifted and placed in boxes, or planted at the back of a Peach-house border. These will force readily, and will come in handy where Mint sauce is wanted for early lamb.

Peas.—Should any seeds of last season's Peas be left over, they may be sown rather thickly in cutting-boxes and put on the pipes in a warm house. If they have been previously soaked in water for a few hours, the seedlings will come through the soil in about a week. When about

six inches high, they may be cut and used as a vegetable for soup, to which I am told they add a delicious flavour.

The Flower Garden.

Carnations.—If seeds are sown now, plants from these will provide a wonderfully effective display when the ordinary border varieties have passed out of bloom. Many fine strains are now to be had from our leading nurserymen, and if these receive careful attention from the seedling stage, it is surprising what a fine show they will make.

Verbenas.—If Verbenas have not already been sown, no time should be lost in doing so. The variety Miss Willmott is somewhat hard to winter, and many experience great difficulty in getting together the necessary stock. Last season I dispensed with cuttings and grew my entire stock from seed, and I was rewarded by the best display of Verbenas I have seen. Do not sow in much heat, otherwise the plants will become weakly. An ordinary greenhouse temperature will suit them best.

Subtropical Plants.—Where plants such as Solanums, Castor Oil and Wigandias are required as dot plants among the summer-bedding subjects, no time should be lost in sowing the seed. Solanum Pyracanthum is very striking as a dot plant.

Dahlia Tubers may now be gone over and placed in a warm vinery to produce cuttings. This will apply more particularly to the better sorts. The Collarette varieties shown by Messrs. Dobbie of Edinburgh have created quite a sensation among florists, and are likely to be much in demand.

Plants Under Glass.

Primulas.—These will now be growing freely, and ought to be given plenty of room to develop the foliage, which in itself is very decorative. As the pots begin to get filled with roots, occasional applications of liquid manure should be given.

Cinerarias.—The stellata type of Cineraria is undoubtedly a very handsome plant when well grown. Where large specimens are required, they may be potted into 8-inch or 9-inch pots, and as growth advances give plenty of surface feeding.

Ivy-leaved Pelargoniums.—Where large specimens of these popular Geraniums are required for exhibition or decorative purposes, the present is a good time to make a selection of the most suitable plants. These may be pruned and trained, and as growth commences they may be repotted in about the same sized pot and kept growing on.

Chrysanthemums.—Examine cuttings of Chrysanthemums each day, and those that have rooted may be taken out and placed on a shelf near the glass in the same house. The idea should be to keep the cuttings as sturdy as possible and avoid all traces of coddling.

Roses in Pots.—These will be pushing up their flower-buds now, and may be fed with liquid manure from time to time. Ventilating should be done with great care, as the cold air from the outside has a very injurious effect on the young leaves. Somehow or other mildew will make its appearance at this stage, and must be held in check. I have found syringing with Bentley's Mildew Destroyer as good as anything for this purpose.

The Hardy Fruit Garden.

Morello Cherries.—Where a large number of these Cherries are grown, the nailing or tying is a long and tedious job, and as these are usually on a north wall, the work can only be done on fine days. Care should be taken not to overcrowd the shoots or tie them up in threes and fours, as one sometimes sees. When the tying has been completed, it will be well to give the trees a good mulching of farmyard manure.

Recently Planted Fruit Trees.—There seems to be a great diversity of opinion as to whether trees should be pruned the first season or not, and I daresay there is a good deal that might be said on both sides. Personally, I am inclined to think that they are better left alone the first season, as, if hard pruned back, they seem to make such rampant growth, and are not so easily checked afterwards.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

IS THE DAFFODIL A FLORIST'S FLOWER?

"YES" AND "NO."

(Continued from page 63.)

I MUST ask "Somerset" another leading question, or, rather, I must fire off a series of short, jerky interrogations to still further, as I think, drive the nail home. Who are the people who pay the higher prices? What do they do it for? Is it only for the same purpose as a breeder of cattle or a pedigree bull? Where would the market for the hybridist be if it were not for the show people as well? Are not the breeders and the buyers of stock often exhibitors themselves? Then, if a show is thus predicated, must there not be some general agreement about the "points" of a flower? I am glad that "Somerset" puts me down as having a "too catholic sense of beauty" to make a sound florist of the Glenny school, because I think it is true, inasmuch as I fully recognise that the Narcissus family is capable of giving us many and varied types, of each of which I could say, "How happy could I be with either, were the other fair charmer away," only for "either" I would put "any," and I would make "charmer" plural. I even think I have a more catholic mind than "Somerset" himself, for I rank a flower of the Frank Miles type as very bit as worthy of show honours as Homespun, and my favourite Countess of Southesk as White Queen. In writing what I did of Cossack—its round, overlapping perianth and its beautiful deep red eye are just what judges like to see at shows—I rather meant readers to infer that which were not exactly my own sentiments. Even when "Daffodils" was written, I grew weary of red eyes and circular perianths; and had I given my decisions when adjudicating in competitions on my own individual likings or dislikings instead of on what I felt was the united consensus of show people's opinion, I do not think my services would have been requisitioned a second time. Since then, however, a change has taken place, and there is a decided tendency, which I am heartily glad to see, for a taking in of many types in place of just a few. Again I ask: Is not this a stronger reason than ever for the adoption of some fixed canons to guide competitors and judges alike? The only valid argument against this is that there should be no shows at all. Does anyone wish this? A last shot in support of "Yes." After all, is not showing a great pleasure to a large and increasing number of cultivators? Must not they be catered for? The most successful single flower society of the present time is the National Rose Society. It is "miles ahead" of any other. I note how it keeps putting on new shows. First a metropolitan, then a provincial, then an autumn, and now a spring. The Rose community want them and they get them. The exhibitions delight many who are not growers for show. So it is with the daffodil.

Now for some remarks to support the "No" answer to my query. I compare the Daffodil with the Tulip; they have so much in common. In the fifties and sixties I had asked, "Is the tulip a florist's flower?" my reply would have ended with "Yes." There was no garden then, I think about in the same sense that there is now. The by-products of the show were not thought of then. The modern Cottage garden

forms are the basic slag rescued from the great heap of cast-offs. The very fact of having a voracious garden that must be fed no less in spring than in summer has changed the outlook entirely. Tulips in olden days were confined to particular beds and arranged in serried ranks with such minute care that a "cabinet" for summer storage was the necessary adjunct of every Tulipist. I feel fairly certain that they were hardly ever to be seen elsewhere in the ordinary borders. Now, even Mr. Needham grows a few others to brighten up his garden, and in doing this I think he is getting out of the condescending-to-the-popular-taste stage and beginning to really like them. Who knows but what he may be an exhibitor at the May-flowering show at Vincent Square on May 14 next?

In all this my meaning is that with the coming of the garden there has arisen a need for a new type of Tulip—tall, strong and effective in colour, such as we get in the Cottage and Darwins, and, to a lesser extent, in those new redivivus types the Rembrandts and the robust striped generally.

In the case of the Daffodil there has not been the "cast off and lost" stage. Anything now up to show excellence has been at once tried in or for the garden, and so it has come about that the Daffodil has blossomed out as the Rose, and that there is going on now in all large emporiums, as well as in the garden of the amateur, a testing and sorting of which the new Royal Horticultural Society's Rules for Awards, which come into force in 1914, are the outward and visible sign. The Daffodil is not a florist's flower alone. It is a garden flower too. It will grow in beds and borders, in grass and in rockwork, in pots and in boxes for cutting. The family pay us good old-fashioned visits of six months' duration, but it is not a limpet like the Perpetual-flowering Carnation and the Rose. December sees the start and May the finish. I fancy we like it all the better because it is not. Enough has been said to show that we must look after the Daffodil's non-show side. I am one with "Somerset" here, at all events, and I quite grant that many which are not suitable for showing have their uses here, and these, no less than the show varieties, want their Glenny. For instance, I cannot advise the purchase of red eyes which fade after half a day's sun, nor yet such miffy subjects as Lemon Queen, if it is for the garden that they are wanted; while, on the other hand, no praises can be too loud for some of the new Giant Leedsis like The Fawn and H. C. Bowles. The Royal Horticultural Society will be the Glenny here, or shall I say they are going to try to be through their Narcissus committee, who now only want the flowers—with the all-important slip faithfully filled up—to be placed before them, and they will then point out by their awards the purposes for which they are most suited. JOSEPH JACOB.

THE ACTION OF SALT ON SOIL.

SINCE the time of Lord Bacon at least, the advantage or otherwise of salt as a manure has been an unsettled question, except with certain crops, and still more uncertain is the method of its working. It has always been a puzzle to chemists. Its connection with potash is now better known, however, or, rather, the relations of potash and soda. There is no doubt, it would appear from experiment, of the solvent action of the soda in common salt on the soil. The very

complete experiments of Dr. Voelcker in the sixties clearly showed this on a large number of soils; the salt produced plant food in the soil in the shape of various chlorides, including sometimes ammonia, which it liberated from manure, guano and other forms of nitrogen. Seeing that salt has this powerful action, it is probably wise to use it in moderate amounts only, and it must not be looked upon merely as a purifier which can be used without any limit. No less an authority than Sir John Lawes even considered salt detrimental, and we know its effect on weeds when used in excess. It seems likely enough that it is the hydrochloric acid in salt that does the mischief, if this occurs, for chlorides are well known to be injurious to certain crops. This is probably why muriate of potash does not succeed so well as the sulphate; in fact, it seems to injure Potatoes, Sugar Beet and Tobacco, making the first named waxy, preventing the ready crystallisation of sugar in Beet, and in Tobacco impairing the quality.

Salt has the property, like other saline solutions, of clearing muddy water, and so it may be useful in clay in preventing the puddling action which nitrate of soda causes. It has other effects, sometimes questionable or harmful, and so it should be used with caution, especially as large quantities seem to be less favourable than small ones.

GERVAISE TURNBULL.

THE WALNUTS AND THEIR CULTIVATION.

THE Walnuts, or species of Juglans, are an important group of trees, for, in addition to producing valuable timber, the fruits of most kinds are edible, while all the species form ornamental trees with distinct and decorative foliage. They are credited with being rather tender, but this only applies to young, fast-grown trees and to premature growth in spring. After a mild winter young shoots are formed earlier than usual, and they sometimes fall a prey to late frosts. So far as winter frost is concerned, they are quite hardy, and well-developed specimens of the common Walnut are found as far North as Aberdeen. As a rule, those growing in the South of England fruit more satisfactorily than those in other districts, trees growing in the North only perfecting fruits occasionally.

The Walnuts require good, deep, loamy soil, such as may be expected to produce good Oaks. As a rule, they are planted as ornamental trees in parks and gardens, rather than to form woods or plantations, but there appears to be little reason why one or two species should not be used by the forester in the South of England. The timber is always valuable, while that which is specially well figured commands a fancy price. A very small quantity of timber is cut in this country, and the bulk of that required by manufacturers is obtained from France, Italy, Asia Minor and North America. That from the first three countries named is the wood of the common Walnut (*Juglans regia*), and that from North America is the Black Walnut (*J. nigra*). It is used largely by cabinet and furniture manufacturers, and is one of the most popular woods for the manufacture of gun-stocks. The fruits of the common Walnut are in demand in European countries for dessert, and the fruits of other species are used in their respective countries for the same purpose. An

oil is also obtained from the kernels of Walnuts, which is used in food preparations and paints, according to the method of extraction, that produced by cool extraction being favoured for the former, and that expressed by heat for the latter purpose.

All the species are propagated by seeds and the varieties by grafting. When seeds can be planted in the positions the trees are to occupy, growth is, as a rule, more satisfactory than when the young trees have to be transplanted. When grown in nurseries they must be transplanted frequently, otherwise long roots will be produced at the expense of fibrous roots.

Although there are comparatively few species of Juglans, they are widely distributed, for they are found from Eastern Europe through Persia and Asia Minor to the Himalaya, China and Japan, while there are also representatives in North America. In addition to the species, there are several varieties of the common Walnut, and also a number of hybrids, which claim *J. regia* for one parent.

Juglans regia, the best known member of the family, is found from Greece through a considerable part of South-Eastern Europe to Persia, Asia Minor and the Himalaya, while a form is also present in China. When growing under exceptionally favourable conditions it attains a height of from 80 feet to 100 feet, with a trunk upwards of 15 feet in girth, but it is more frequently met with between 50 feet and 80 feet in height. It is easily recognised by reason of the silvery bark of the younger wood and by its pinnate, glabrous leaves. In other species the leaves are clothed with soft hairs. The leaves are usually from 8 inches to 10 inches long, and are composed of from five to nine elliptical or ovate leaflets. The male flowers are in catkins from 2 inches to 5 inches in length, and the female flowers appear in small clusters. It is grown in this country for ornament and fruit. Large numbers of trees are grown in France, Germany and Switzerland for the sake of the fruit. Some trees form large burrs on the trunks, and the wood from them is usually beautifully marked. It is cut into veneer and used for the better qualities of furniture. Several well-marked varieties have been given varietal names. Distinct ones are *J. laciniata*, with finely divided leaves; *J. maxima*, with large fruits; *J. monophylla*, in which the leaves may consist of one, two or three lobes; *J. præparturiens*, a form which originated in France and is remarkable on account of its coming into fruit at a very early age; *J. heterophylla*, with leaves of various shapes, sometimes almost normal and at others having the leaflets almost as finely divided as in *J. laciniata*; and *J. serotina*, said to be a Chinese form, which commences to grow somewhat later than the type.

J. nigra is an important North American species which, under the most satisfactory conditions, grows 150 feet high, with a girth of 15 feet or 20 feet. Numerous trees in the South of England approach or exceed 100 feet in height, with a girth of from 9 feet to 12 feet. Its timber is of a rich dark brown or blackish colour, and is much appreciated by furniture-makers. The leaves are handsome, up to 3 feet long on vigorous trees, and composed of from fifteen to twenty-three leaflets. The globular fruits have very thick shells and small kernels. This species is worth planting under forest conditions in the South of England. It is commonly called the Black Walnut.

J. cinerea.—This is the Butternut of the United States. Forming a handsome tree from 50 feet

to 100 feet in height, it produces long, pinnate leaves, made up of from eleven to seventeen oblong, hairy leaflets, and bears its fruits in clusters of from three to five. The nuts are oblong, $1\frac{1}{2}$ inches to $2\frac{1}{2}$ inches long, and the shells are deeply furrowed. The kernels are pleasantly flavoured and large. There are very few large trees in this country, one of the best being recorded as growing in the grounds of Mr. C. S. Dickens at Coolhurst, near Horsham. This exceeds 50 feet in height.

J. cordiformis is a Japanese species, notable for its fine foliage and long racemes of male flowers. It forms a tree 50 feet high and produces leaves between 2 feet and 3 feet in length, made up of from eleven to thirteen broadly oblong leaflets. The male flowers are green, and produced in drooping catkins 1 foot or more long. The female flowers are also borne in long catkins, and from four to six fruits may sometimes be seen on a single stalk. These fruits are heart-shaped and about an inch wide. The kernels are fairly large and pleasantly flavoured.

J. mandshurica is a somewhat similar tree to the last named, but is a native of Amurland. It commences to grow early and is often injured by frost.

J. pyriformis and **J. vilmoriniana** are hybrids between *J. regia* and *J. nigra*, combining the characters of both species; and *J. alata* is a hybrid between *J. cinerea* and *J. regia*, its distinguishing features being intermediate between the two.

Other species which may be obtained are *J. californica*, *J. sieboldiana* and *J. rupestris*. D.

BOOKS.

Colour Standards and Nomenclature.*—This is the title of a very wonderful book, produced after much labour and expense by Mr. Robert Ridgway, the Curator of the Division of Birds in the United States National Museum. In the preface the author bemoans the lack of a colour standardisation, mainly, I take it, because it would be so exceedingly useful to ornithologists and other naturalists. He calls attention to the fact that he made an attempt more than twenty years ago to remedy the deficiency by publishing a book containing 186 samples of named colours. Naturally, these were found to be not nearly enough to be of any great use, so Mr. Ridgway set to work to enlarge and improve upon it. The result is the present edition of "Colour Standards and Nomenclature," containing no fewer than 1,115 distinct shades of colour, each one in its proper place according to the ideal chromatic scale which he has adopted after, as it were, making the solar spectrum "loop the loop." The means by which he has arrived at all the different shades portrayed from the six fundamental colours of red, orange, yellow, green, blue, and violet occupies the first part of the most instructive prologue. This in turn is followed by discussions on "Colour Names" and "Colour Terms." In the first of these we have the pros and cons for the adoption of a recognised standard, not only of colour, but of colour names, and I think the author has very little difficulty in showing that the one is as necessary as the other. It is of no use to have a purple colour standard unless everyone agrees to put into the background his own preconceived idea of what purple is, and eliminating the personal equation

* "Colour Standards and Nomenclature," by Robert Ridgway. Eleven hundred and fifteen named colours; fifty-three coloured plates; 8vo., cloth; 1913; price £1 15s. English agents: Wesley and Son, 28, Essex Street, Strand.

altogether, to adopt that of the standard. The latter part is taken up with definitions of "colour terms." Here, again, when we speak or write of "pale colour," "broken colour," "hue," "tint," "shade," "tone," &c., we must all mean exactly the same thing by these expressions or words, or we shall be at cross purposes and be but little "farrarder." The remaining pages contain technical tables on the composition of colours. Twenty-four shades are so arranged that they are easily referred to. I am only just beginning to make any practical use of it, but my first impressions are decidedly favourable. It is very handy, much more so than the Colour Chart (*Le Répertoire des Couleurs*), which I have always found rather clumsy to handle. It contains about the same number of shades as the older work; while its names, such as endive blue, vetiver green and xanthine orange, although they sound strange and unfamiliar, are no more so than those of the Chart, and, like them, they can be referred to by number. I expect it will be found easier to match the colour of the object with that in the book if a piece of white cardboard, with a small space cut out to exactly fit the oblong on the page, is used. By this means much more exact correspondence will be obtained between the one and the other, for necessarily, as the work is only in octavo size, the shades are somewhat close together. I am looking forward to the time when I can call it an old friend. I may be mistaken, but somehow or another I feel this is what it is going to be.—JOSEPH JACOB.

Albury Park Trees and Shrubs.*—About three years ago a catalogue of the trees and shrubs of Syon House Gardens was favourably reviewed in these columns. The book under review forms a companion to the Syon House list. It is compiled by the same author and has been undertaken at the request of the Duke of Northumberland, the owner of both the Syon House and Albury estates. Reference to Albury is frequent in horticultural literature, and the publication of a complete list of the trees and shrubs of the estate forms very interesting reading. The following are selected from among the most remarkable of the trees recorded: *Tilia argentea* or White Lime, a magnificent specimen with remarkably erect branches, 109 feet in height, girth 16 feet; the lower branches have a spread of 88 feet, and it is claimed to be the finest example in cultivation. *Populus serotina* or Black Italian Poplar; this tree is found to be not less than 150 feet, which is almost a record height for any tree in this country. *Cedrus Libani* or Lebanon Cedar; the tallest at Albury is 127 feet high by 15 feet in girth. Three trees in a fine group on the lawn north of the house are said to be among the tallest Cedars in cultivation. *Sequoia gigantea* or Wellingtonia; the finest specimen at Albury has attained a height of 97 feet, by 8 feet 10 inches in girth. This must be one of the tallest Wellingtonias in cultivation. The Yew hedge at Albury is believed to have been planted about 1676 under John Evelyn's direction; it is 448 yards in length with a gap of 90 feet. It contains about two hundred trees and the stumps or a number of those which have died. We have nothing but praise for the admirable and careful way in which this work has been prepared, and we hope the day is not far distant when lists on similar lines will be issued from other noted gardens and estates throughout the country.

* Catalogue of Hardy Trees and Shrubs growing at Albury Park, Surrey. Compiled by A. Bruce Jackson. For private distribution only. Printed by West, Newman and Co.

THE GARDEN.

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FEBRUARY 14, 1914.

NOTES OF THE WEEK.

Editorial Notices.—In this and subsequent issues editorial notices will be found immediately preceding "Answers to Correspondents." This will enable us, at the request of a large number of readers, to devote more space to "Notes of the Week."

An Annual for Present Sowing.—The beautiful old-fashioned annual named *Salpiglossis* is again becoming a favourite for summer bedding, and as the new shades are so fine, they are worth a little extra trouble in growing. As a rule, they are not sown early enough, at least in cold districts. Seed may now be sown in a cool house or frame, and an endeavour should be made to have good, sturdy plants for putting out in May.

Propagating Delphiniums.—It is not too late to increase the stock of named varieties of Delphiniums. If young shoots are taken from the base of old plants which are starting into growth, placed in small pots of sandy soil and grown in a cold frame, they will form nice young plants for planting in April. By this means a succession of flowers will be obtained. The soil for these plants should be of a rich nature.

An Interesting Rock Plant.—*Erigeron mucronatus*, with its small, Daisy-like flowers, should find a place in every rock garden. It is a Mexican species of prostrate habit, and it flowers continuously from June till September. When first open the flowers are pink, afterwards changing to white, and as the flowers are continually opening, both colours are usually to be seen on the same stem. This *Erigeron*, which is synonymous with *Vittadenia triloba*, is seen to the best advantage when grown on a protected shelf in the rock garden and allowed to overhang large boulders. It is of perennial duration and may be raised from seed.

The Sweet Pea Annual.—This, the official organ of the National Sweet Pea Society, has just been published, and, as usual, contains a great deal of information that must be of considerable value to those who love and grow these flowers. We are pleased to find it much better illustrated than last year's "Annual," and the answers to the six questions sent out to members by the committee will provide much food for reflection. We wish an analysis of the first four of these answers had been included, as was done last year. The articles on Sweet Peas in Japan and early-flowering Peas in New Zealand prove that the cult of the flower is extending to many

parts of the world. A copy has been sent to every member of the society. Non-members wishing to obtain it can do so from the secretary, Mr. H. D. Tigwell, Greenford, Middlesex, post free, 2s.

Alpines Under Glass.—Visitors to Kew during the next month or two should make a point of visiting the Alpine House, a modest little structure that nestles away in a corner of the herbaceous grounds. Already it is gay with such Crocuses

Ferns. The russet brown fronds of the latter, with the dead leaves of the trees that have nestled among them, make a charming foil for the glistening white Snowdrops, and it is in such situations as these that their beauty remains unsullied for a long time. In some places the little purple-flowered hardy Cyclamen Coum is added to the Snowdrops, with excellent results.

A Good Early Yellow Crocus.—One of the best Crocuses that are flowering in the open garden just now is *C. chrysanthus*, a brilliant yellow flower that makes a delightful patch of colour in the winter sun. Although it is not quite so sturdy as the yellow Dutch Crocus, the yellow hue is quite as good, and on account of its early flowering should be more widely grown. There is a good variety of it named *fusco-tinctus*, the outside of the petals being slightly tinted with a sort of brown shade.

An Ancient Royal Fern.—An interesting specimen of the Royal Fern (*Osmunda regalis*) may be seen in the Rock Garden at Kew. It was presented to Kew by the Director of the Imperial Botanic Garden, St. Petersburg, and is one of several which were originally obtained from near Adler in the Caucasus, on the shores of the Black Sea. Estimated to be over a thousand years old, the plant has a large, woody rootstock, with a circumference of 5 feet at the base. It is about 2 feet 6 inches high, and has formed eight distinct stems, with ten separate crowns, having a diameter over three feet. An account of this plant is given in the *Kew Bulletin*, 1913, page 359.

Wart Disease of Potatoes.—Stringent regulations for preventing the spread of this disease of Potatoes have just been issued by the Board of Agriculture and Fisheries. Potatoes are not to be planted in infected areas without a licence granted by an inspector of the Board, and such licence may prescribe the varieties authorised to be planted. A licence is also necessary for the removal of Potatoes that have been grown in an infected area. Notification of the disease



ERIGERON MUCRONATUS OVERHANGING LARGE BOULDERS IN THE WISLEY ROCK GARDEN.

as Sieberi, chrysanthus A. E. Bowles and biflorus; Irises reticulata, Danfordiae and Tauri; Cyclamen ibericum, and some of the earlier Saxifrages. In a week or two there will be a great many more flowers of interest, and, owing to the shelter, these can be studied in comfort.

Snowdrops and Hardy Ferns.—A particularly pleasing picture in the woodland just now may be found where hardy Ferns are grown beneath lofty trees, and Snowdrops planted between the

must be given by the grower to the Board, or some person authorised by the Board to receive such notice, and an inspector may, by notice served upon the occupier of any premises within an infected area, require him to lift any Potatoes suspected of being diseased. Those who grow Potatoes should at once write to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W., for copies of the Orders relating to wart disease.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Antirrhinums as Bedding Plants.—I was pleased to see Mr. E. Harriss's letter, page 42, issue January 24, in which he recommends the above plants as bedding subjects. The intermediate section is the best for general purposes, but the tall-growing one is equally good for grouping in borders that are wide enough. Nearly twenty years ago I grew Antirrhinums in a long border in front of a plant stove. The soil in this border was rich, and the plants formed very fine specimens, the foliage, as well as the flowers, being handsome. — G. G

Cistus corbariensis.—The note and accompanying illustration of this charming Rock Rose which appeared in the issue of THE GARDEN for January 31 would, no doubt, be interesting to many readers who take a delight in rock gardening. *C. corbariensis* is by far the best of all the family for growing in the rockery, being dwarfer and more diffuse in growth than any of the others in general cultivation. Regarding *C. laurifolius*, the writer of the note says it "does quite well even in Scottish gardens," evidently inferring that this is the only variety suitable for growing so far North. This, however, is not the case, as we have grown several varieties quite successfully as far north as Perthshire, where they withstood our ordinary winters with impunity, although they did succumb to one of extra severity. Varieties which grew well and flowered profusely were the one under notice, *corbariensis*, *florentinus* (both of which undoubtedly have a good deal of *salviaefolius* blood in them), *ladaniferus*, *salviaefolius* and *laurifolius*. The latter is exceedingly floriferous, and also ripens its seeds plentifully. Last autumn we saved seeds of this variety, which were sown a fortnight ago in heat, and they have already germinated. Rock Roses are liable to be damaged by heavy falls of snow, the branches breaking off very readily when they are pressed downwards; consequently, it is a good plan to support them on the approach of winter, so as to avoid damage from this cause.—W. L., *South Ayrshire*.

Primula pulverulenta Mrs. R. V. Berkeley.—The notes on this beautiful Primula by Dr. Macwatt and "A. D. M." in your issues of January 10, 24 and 31, both refer to the facts that it was raised from seed "sent home by Messrs. James Veitch and Sons' collector from China," and that it "has not produced seed in this country." But as they both stop at that point, it may have been overlooked that the variety Mrs. R. V. Berkeley is not unique, and failed to get an award at the International Show at Chelsea because an identical albino form had been shown in 1911. On June 6 of that year Mr. Lawrence Johnston showed two very fine forms of *pulverulenta* which he had raised from seed. One was the white form

with orange eye, the other was a very soft pink form, and, under the impression that intermediate shades of colour would follow, the individual names that had been given to the two varieties were dropped, and they were unanimously given the award of merit under the name of the Hidcote strain. They failed to pass into commerce, however, and seem to have been overlooked; but we understand that they proved good seed-bearers, and that the progeny to a large extent bred true, which is the important point. Last year an albino *pulverulenta* identical with Mrs. R. V. Berkeley turned up in a batch of seedlings in an East Coast garden and also proved fertile. There is little doubt that seed is the only satisfactory method of propagating these short-lived Primulas,



AN AVENUE OF ANCIENT YEWS IN THE GARDENS AT COPPED HALL, ESSEX.

and is essential if the variety is to become popular.—R. W. WALLACE.

Yews and Churchyards.—Will you please give me, through the medium of THE GARDEN, the reasons why Yew trees are so frequently grown in churchyards? Thanking you in anticipation,—M. H., *Coventry*. [The wood of the Yew, although very hard, is also flexible and elastic. In olden times it was in great request for the making of bows, and for this reason it was planted in churchyards, where, we may assume, the inhabitants were free to cut their own bows. But it was not only in churchyards that Yews were planted. At Albury Park, Surrey, there remains an old Yew hedge 10 feet high and a quarter of a mile long. At Copped Hall in Essex, "at one time a mansion of pleasure and privacy for the Abbots of Waltham," is a

famous Yew avenue which we illustrate on this page. At the Palace, Hadham, Hertfordshire, which once belonged to the Bishop of London, there stands a Yew hedge 3 yards thick; and at Bishopsbourne, near Canterbury, there are Yew hedges about 14 feet high and 10 feet thick. While the Yew is now a feature of many Old English gardens, in former times men loved it with a certain reverence for the service it rendered them. Thus appropriately does Conan Doyle, in his "Song of the Bow," speak of its making:

"Of true wood, of Yew wood,
The wood of English bows;
So men who are free
Love the old Yew tree,
And the land where the Yew tree grows."—ED.]

Canker in Fruit Trees.—

"Scientist," page 56, gives an exhaustive account of the cause of canker in fruit trees from his point of view, and would have us believe that all canker is caused by the fungus coming in contact with wounds in the bark. This is an assertion that I do not agree with, and for reasons which I will endeavour to show. In some gardens the soil is a stiff loam on the surface and the subsoil is of a heavy character, not quite clay, but a near approach to it, and consequently of a cold nature, and in its natural condition very impervious to a free percolation of water from heavy rains. Where the surface soil is, say, from 1 foot to 2 feet deep, and of a free-rooting medium, when well dug and constantly manured, but with the subsoil left in its natural condition, this leaves a hard, pan-like substance below, causing a lodgment for superfluous water, from which it cannot drain away rapidly. Such a combination of uncongenial circumstances is one of the main causes of canker. Now, trees so planted will develop much canker in certain varieties—as Lord Suffield, Potts' Seedling, Cox's Orange and Warner's King. Trees planted in the autumn quite free from any wound whatsoever—in fact, never pruned at that period—will develop canker the following autumn. Such an instance as this does not bear out "Scientist's" views. Some of the worst cankered

trees in soil of this description—those of Cox's Orange Pippin—if taken up, planted afresh with the roots much nearer the surface and in a compost of a lighter character, will grow away afterwards, feeling none the worse for their previous cankered state. If varieties were chosen that are not liable to canker in unsuitable soil, we should not hear so much complaint about it. How is it we seldom hear of canker on Bramley's Seedling or Worcester Pearmain growing next to affected trees and receiving the same treatment in pruning, and that sometimes pretty rough when the land between the trees is cropped with vegetables and horse labour is employed? Under such conditions trees do receive wounds in the bark. Writers with purely scientific knowledge of tree growth do not consider the requirements of the roots under exceptional circumstances.—E. M

The Daffodil in New Zealand.—It may interest your correspondent "F. H. C.," whose remarks appear in your columns of November 1, 1913, page 547, to know that New Zealand-raised seedlings occupied a much more prominent place in the Auckland Daffodil Show than appears in the newspaper cutting from which he quotes. In the champion vase class for forty varieties, the winner staged twenty-seven seedling varieties of his own raising, and won with points to spare from two other strong exhibits. In the single bloom open class, four out of the eight classes were won with local-raised seedlings, and in one other class a local-raised seedling gained second place. Two very fine seedlings were also shown in the seedling classes. The Auckland daffodilists are very keen, and keep well up to date with new varieties, so that the honours obtained were won in good company. Whether this justifies the assertion "sic transit Gloria Mundi" I leave to "F. H. C."—THE JUDGE AT THE AUCKLAND DAFFODIL SHOW.

Colour Effects with Annuals.—As mentioned by your esteemed contributor Mr. R. P. Brotherton on page 30, issue January 17, the coloured illustration of annuals accompanying THE GARDEN for January 3, together with notes relating thereto, raises several interesting points concerning colour combinations. The arrangement of colours is a matter for the display of individual taste to such an extent that it would be invidious to lay down any hard-and-fast rules with regard to it; but, at the same time, it is well to bear in mind that certain glaring contrasts should be avoided if the best possible results are to be obtained. In the above-mentioned coloured plate the sharply defined belts of brilliant blue, white and rosy carmine are, I venture to think, in vivid contrast rather than harmonious blending. May I suggest a colour-scheme to be worked out from one end of the border to the other, rather than across it? By beginning at one end with white and cream flowers and following with yellow and orange to deep scarlet, a return could be made in reverse order to cream and white. Blue flowers could then be used, beginning with the palest shades and gradually deepening the tones until purple is reached, again reverting gradually to white. Then pinks could be introduced, the deeper rose shades following the paler tones, until crimson is arrived at. Then, again, by gradations of colour in reverse order, white could be reached. In all cases I would suggest that the palest shades be used near the front of the border. The diagram will explain the notes.

White and cream.
Yellow.
Orange.
*Scarlet.
Orange.
Yellow.
Cream and white.
Pale blue and mauve.
Blue.
*Purple.
Blue.
Mauve and pale blue.
White and cream.
Pale pink.
Pink and rose.
*Crimson.
Rose and pink.
Pale pink.
Cream and white.

The asterisks indicate where the deepest tones could be used.—H. TURNER, Serlby Gardens, York.

FORTHCOMING EVENTS.

February 17.—Broughty Ferry Horticultural Association's Meeting. The Women's Agricultural and Horticultural International Union Dinner.

February 18.—Croydon Horticultural Mutual Improvement Society's Annual Dinner.

February 19.—Linnean Society's Meeting.

February 24.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. on "The Uses of Explosives and of the Blow Lamp."

SWEET PEA STREAK AND OTHER DISEASES.

THERE seems but little doubt that some confusion has arisen with regard to the diseases from which Sweet Peas suffer. Until a few years ago mildew was the only fungus attack which Sweet Pea growers feared to any great extent, but with the advent of the wavy standard forms more attention began to be given to this always popular flower. More care was lavished upon it individually, more was expected of the individual, and more note was taken of a single death here and there.

Streak.—Then we began to hear of streak. Sometimes a brown streak appeared in the stem, but in almost all cases of the disease the upper parts of the plants began to turn yellow, the leaves to become spotted, and a curious curled appearance of the upper part of the stem and the flower-buds appeared. Attacked plants usually died more or less rapidly, and sometimes looked wilted for a time before they died outright. It seems clear now that more than one disease has been included under the term "streak."

A very large number of plants said to be affected by streak reached the present writer, and as a result of his examination of them and subsequent experimental infection of plants, he came to the conclusion that the large majority of these cases of disease were due to the attack of a fungus called *Thielavia basicola* upon the roots. It was often very difficult to make out the gross symptoms of the disease affecting the plants from the specimens sent, as they had often been out of the ground for several days and were frequently badly packed; but it is certain that not all of them showed the brown streak in the stem which is characteristic of the true streak disease. Mr. Massee, who also examined a very large number of plants, also came to the conclusion quite independently that we had to deal with a root disease.

A Root Disease.—The symptoms present in the root were the darkening of a less or greater length of the root surface, and sometimes also of the base of the stem, owing to the presence of the dark chestnut-coloured spores of the fungus upon the root or stem base and the death of the parts attacked. This dark part never extended far up the stem. The death and rotting of portions of the root adversely affected the stems and leaves owing to the check imposed upon the collection of water and its supply to the foliage, and many of the symptoms outlined above followed as a natural consequence of this check.

Checks to Growth.—The present writer gave an account of his experiments with the fungus on the Sweet Pea in the Journal of the Royal Horticultural Society, and showed that the attack of the fungus upon the root produced the root-rot, and, after causing the shrivelling and yellowing of parts of the stem remote from the point of attack, brought about the death of the plant. The most significant thing arising from these experiments was, however, the difficulty experienced in causing the fungus to attack the root when growing under healthy conditions; but when a check was imposed upon its healthy development, the root was speedily attacked and the plant succumbed, whereas where the root was similarly checked and there was no fungus, the plants recovered without exception. It seems, therefore, that a check to the root may lay the plants open

to attack, and as the fungus is widely distributed over the country in the soil, the attack is very likely to follow. Probably any check will be an efficient preparer of the plant for attack, and one cannot help thinking that the methods often adopted, with the very best intentions, in preparing the soil for Sweet Peas lay them open to the attack. Instead of intimately mixing manure with the soil, it is too often placed in layers—a layer of soil and a layer of manure, and so on. Too much manure is used. A trench is dug which acts as a trap, into which water runs from other parts of the soil as into a drain, and, quite likely, as into a drain without sufficient fall. Watering is indulged in too frequently or injudiciously, and so on.

Preventive Measures.—It seems evident that if one could sterilise the soil effectively, the fungus would not prove troublesome; but the difficulties of doing this outdoors are at present insuperable, and no kind of chemical treatment has, so far, proved really effective. All that can be done at present is to cultivate the plants rationally, not to over-stimulate or grow them in an acid soil, to see that supplies of potash and phosphates are ample, and to take great care as to the fashion in which watering (if any) is carried out. We ought not to mix up these diseases, now we know we have more than one to deal with, and perhaps the best name to give this would be Sweet Pea root-rot. It is without doubt very widely spread in this country.

Another Disease.—Much more rarely we find another fungus, a species of *Fusarium*, attacking the roots of the Sweet Pea and bringing about a withering of the plant. We may call this wilt disease. The fungus grows up into the stem and stuffs up the vessels along which the water flows, so that the supply is cut off from the leaves. It is similar in its action and in its origin to the sleepy disease of Tomatoes, and, if it occurs, the plants attacked should be uprooted and burned, and the plot where it occurred avoided for some years for Sweet Pea cultivation.

The True Streak.—Much more recently it has been discovered by Miss Cayley that the water-soaked areas in stem (forming streaks) and leaves, which are characteristic of some cases of disease, are due to the attack of certain bacteria, and it is, since this attack is apparently always characterised by streaky areas in the stem, to this form of disease that the term "streak" should be restricted. Comparatively little is known about this disease, but the bacilli appear to live in the spaces between the cells and to pass from place to place through these spaces. They seem to develop rapidly only after a period of hot weather, and may exist in the plant without betraying their presence, ready to spread as soon as conditions are favourable. Unfortunately, they may exist in the seeds, and, at any rate at times, show their presence by brown areas inside the cotyledons of the seed, spreading thence through the plant. Whether they also get into the plant from the soil, as is probable, or are carried from plant to plant by such insects as aphides or pests as eelworms, as is possible, is not yet fully proved. In any case it is difficult to see how such an insidious attack can be avoided, though it is just possible, but not entirely certain, that rigid elimination of diseased plants from the seed stocks and prompt burning of all diseased plants in the areas cultivated would do something to check the trouble.

F. J. CHITTENDEN

PRACTICAL HINTS ON GROWING SWEET PEAS.

WITH the lengthening days the work among the Sweet Peas will commence. Certainly the grower who raises plants under glass, whether it is in the autumn or the spring, will have the seed

sown; but thus far the seedlings will not have occupied a great deal of time. The autumn-sown plants are now growing freely, and young growths should be pushing from the base of the plants. The present time is a very suitable one to handle the plants, and it will be quite wise to put a few small twigs, preferably of fine Birch, to keep them more or less erect. This is not absolutely necessary, but it prevents the young growths becoming entangled with their neighbours, and certainly keeps them sturdier by allowing the free circulation of light and air between the plants. The soil in which plants were sown singly in pots in the autumn, or potted off singly soon after germination, after two or three months in a cold frame is apt to become rather green on the surface, and, during the operation of twigging, the green should be removed; this will keep the soil sweeter and tend to better root action. An occasional spraying overhead on fine days with a very weak solution of permanganate of potash will be beneficial, and I would certainly suggest that such treatment be continued, even after the plants are put out in the ground. It is needless, perhaps, to add that too much air cannot be given at this season, for it must be borne in mind that very few weeks will elapse before it is necessary to plant out, and they cannot be in too hard a condition to withstand the cold winds that are often experienced soon after planting. These winds are, I think, more harmful than a few degrees of frost.

Spring-Sown Plants should be coming through the soil nicely. They should have had slight warmth during the period of germination, but, after the first pair of leaves have unfolded, the process of hardening off must be commenced, or the young plants will soon become attenuated.

The grower's aim should be to keep them stiff enough to stand quite upright until planting-out-time.

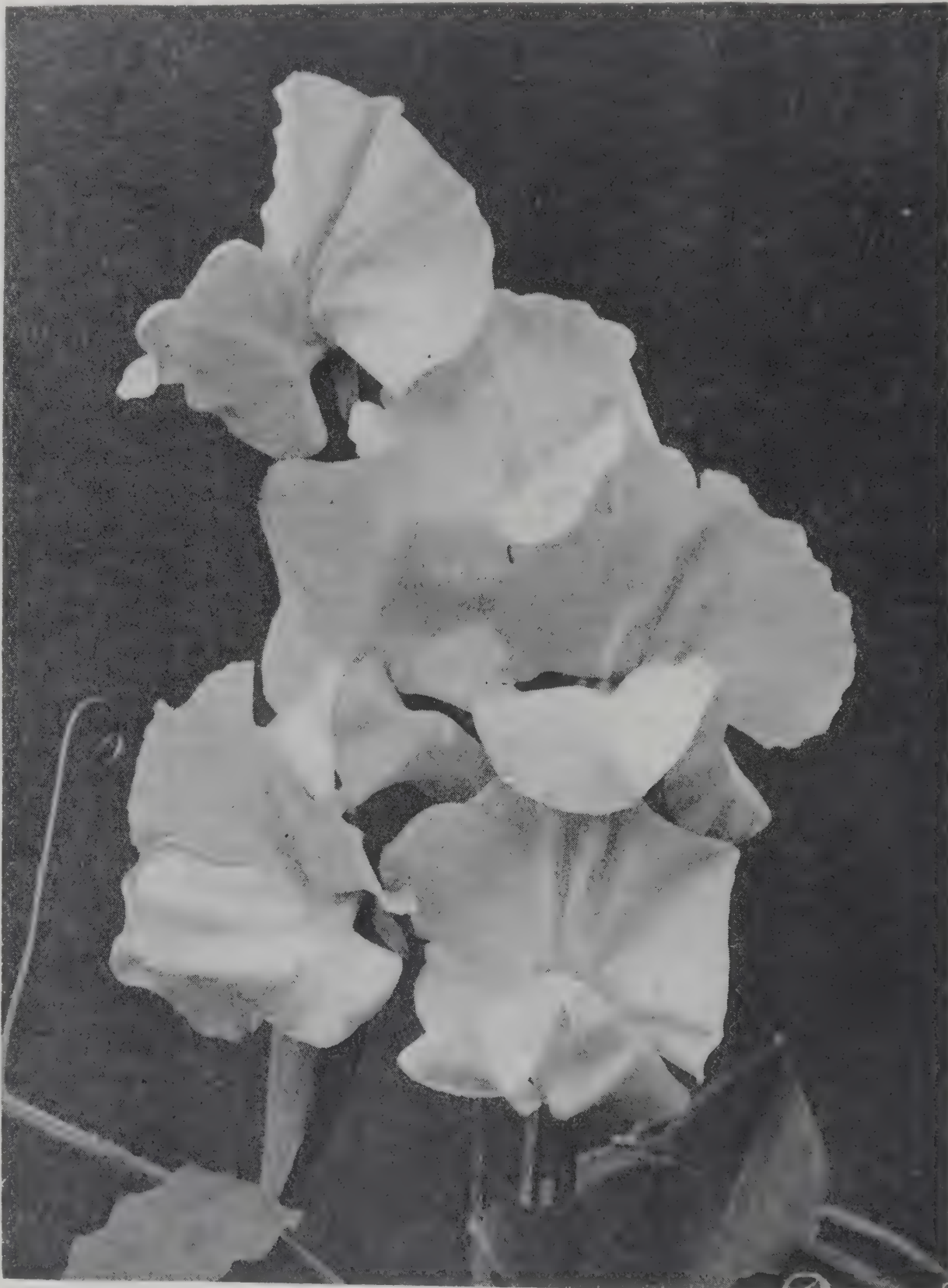
Sweet Peas Under Glass.—Plants that are being cultivated for blooming under glass should now be in their flowering pots or planted in the borders, whichever system is being adopted. Great progress has been made in this phase of cultivation during the past year or two, and results obtained which even five or six years ago seemed well-nigh impossible. But such results are only

moisture at the roots and in the air will be beneficial. Where a good number of plants are grown under glass, the question of training them crops up, and though I have seen several different systems tried, including ordinary stakes, Bamboos and various string arrangements, I doubt if there is anything so good and easily fixed as the Simplicitas Netting, this being even more effective indoors than in the open. It is too late to speak of varieties for cultivating under glass this season, and except

for exhibition very few varieties are required; but it may not be out of place to mention a few that I think will be greatly in demand for this purpose for 1915. Dobbie's Frilled Pink, quite an acquisition; Thomas Stevenson, considered the finest variety under glass; Double Maggie Stark, a nice soft orange pink; and Dobbie's Lavender G. Herbert and R. F. Felton, both grand varieties in this colour. Robert Sydenham, though little has been seen of this up to now, before the end of the season, if I am not greatly mistaken, will have established a reputation second only to my namesake. Margaret Atlee I have not seen under glass, but I feel sure this will be quite good enough in the deeper cream pinks, while Lady Miller cannot fail to be in demand as a pale cream or salmon pink. White is always in demand, and Florence Wright Spencer will be difficult to beat, the extra substance in the bloom making it a desirable variety.

Preparation of the Soil.—Turning to the preparation of the soil out of doors, one naturally infers that it has all been well cultivated before this, and those who have not given their ground a dressing of lime on the surface may with advantage do so some time before this month is out. Not only will it benefit the soil—if heavy by its mechanical action—but it will tend to free it of slugs, wireworm and other pests which in the early stages

do much harm to the plants. Ground that is known to be badly infested with wireworm may be partially cleared of this pest by burying Potatoes or Carrots in the ground and examining them every second or third day; this for preference before the plants are put out. To facilitate matters at planting-out-time, short, bushy stakes should be prepared during bad weather and tied up in bundles ready for use, as all plants should be staked



SWEET PEA MRS. HUGH DICKSON, A BEAUTIFUL CREAM PINK VARIETY SUITABLE FOR EXHIBITION AND GARDEN PURPOSES.

obtained by very careful cultivation, and one of the chief essentials is to keep the plants growing very steadily at this season. Great care is necessary in watering, and once they have been well watered in after potting or planting out, very little more will be needed for some time; but as the days lengthen and the temperature of the house is raised by sun-heat, both root and top growth will be very rapid, and, naturally, a little more

immediately they are planted. If left lying on the ground only one night, it is just possible that some may get eaten by slugs. Where they are grown naturally for cutting purposes, there is nothing better than good, long Hazel stakes, and as these are eagerly snapped up nearer staking-time, it is wise to order them beforehand and get them pointed ready, the same remark applying to posts, &c., where the cordon system of training is to be adopted.

Sowing Seeds in the Open.—There are still a good many lovers of the flower who have neither the time nor the convenience for raising their plants under glass, and must perforce sow them in the open ground. The date of sowing must, naturally, differ according to the locality and the nature of the soil; but to get the flowers reasonably early, sowing should not be delayed longer than can be helped. On light soil the seeds may be put in almost at once, but on heavy loams it might be wise to defer it till the first week in March. An inch to 2 inches in depth is sufficiently deep to make the drills, and two narrow drills are preferable to a wider one; but, whichever system is adopted, more seeds must be sown than will be needed as plants, thinning them out later to a few inches apart.

THOMAS STEVENSON.

SWEET PEAS IN LARGE POTS.

When Garden Space is Limited.

—What a convenience an adjustable garden would be! When plants are plentiful, just to turn a screw and it is larger; or, when something has gone wrong, to give a twist the other way, and lo! it is smaller. For several seasons now, when Sweet Pea sowing-time has come round, I have wished for a garden a size or two larger. The naughty Daffodils and Tulips never leave a square foot of ground for anything else, and I must have my Sweet Peas. Luckily for me, I had some two dozen large pots from 10 inches to 12 inches in diameter, which it struck me might be the means of solving the difficulty. Four years ago these were requisitioned, and the result has ever since been most successful from a cutting-for-the-house point of view.

I raise seedlings in cold frames in 3-inch pots, and in due course, when they are about six inches to eight inches high, I transfer them to these large pots, which are then placed in a row alongside a convenient wall, about a foot or rather less away from it. Hence they are trained in the usual manner on sticks, which are made firm by being attached to a couple of wires (one higher and one lower) stretched between two iron (in my case, but wooden ones would do as well) posts, fixed permanently at the ends. They do not get much food, for my object is to induce short, sturdy growth, so as to be able to cut the whole top of some of the flowering shoots to furnish my vases with greenery.

Everyone to his fancy in Sweet Pea arrangement, as in other things. Personally, I think

most arrangements have not half enough foliage about them, and that nothing excels the plant's own leaves for the purpose. I find in the early weeks of blooming quite sufficient longish-stemmed flowers to fill up, if there is too much green. As the season advances this does not seem necessary, for I use lower, wider and shallower receptacles, which suit the more bushy tops.

The idea of pots may be utilised for other purposes besides cutting. The whole row may be left to bloom, when it is capable of giving a fine three weeks' show; or individual pots may be used for vacant spaces in borders by being plunged in the soil. Necessity is the mother of invention. It is enough for me to suggest, as I have done, the utility of pots.

Sweet Peas and Tulips.—In conundrum form it would be, "Why are Sweet Peas like Tulips?" The stock answer, "Because there is a 'p' in both," is quite true; but it is too



A COLONY OF THE BEAUTIFUL SAXIFRAGA BURSERIANA GLORIA.

parochial and too "catchy." There is a real reason. Both plants have for different reasons been very useful to the botanist. No one will ever forget the part the Sweet Pea has played in Mendelian development. True, the abbot himself used only the culinary Pea, but one has only to turn to such a book as R. C. Punnett's "Mendelism" (Plate IV.) to see how in subsequent investigations the Sweet Pea itself has been used. In a similar way the Tulip was used in the eighteenth century. It is easy to see how its large and simple-shaped flower made certain observations comparatively easy and possible. As a definite instance I would cite a small book by John Hill, M.D. (1758), entitled "Method of Producing Double Flowers from Single by a Regular Course of Culture." Here the Tulip is the flower chosen, on account, as the author says, of its size and simplicity.

JOSEPH JACOB

A BEAUTIFUL SAXIFRAGE.

SAXIFRAGA BURSERIANA GLORIA.

THE first of the Cushion Saxifrages which brighten my garden in the earliest dawn of spring is *S. burseriana*; in fact, long before the official date which separates spring from winter.

Usually the first week in January sees the blossom points in the close, greyish green, hedgehog-like tuft begin to swell, and if we are favoured with a reasonable amount of bright light, these buds rapidly develop, taking on a bright red hue. Should the conditions of our variable climate then be less favourable (as they not infrequently are), it is surprising how long the embryo flowers will so remain. If, however, as this year, the weather is bright and the temperature moderate, the buds push out upon stalks

some 1½ inches long and then open, displaying beautiful, pearly white flowers of a satin-like texture daintily crimped at the edges. The stalks which support these lovely flowers are of the rich red colour which characterises the buds, the whole making a most attractive picture in our alpine garden so early in the year. If the elements are kind, or if a roof glass is arranged above the tuft so as to protect the flowers from heavy rain, it is surprising how long they will remain in good condition, despite their delicate and fragile appearance. The comparatively recent form known as *Gloria* has flowers considerably larger than the type, while the foliage also appears to be more sturdy. The accompanying illustration of a very fine group grown and staged by Mr. Clarence Elliott exhibits the attractive appearance of a colony of this Saxifrage, and also indicates how very effectively it can be disposed among the

outcropping rocks in our alpine garden. Of late there has been considerable controversy as to whether it is a shade or sun lover. From the small, narrow, pointed leaves it suggests that it is an inhabitant of sunny districts, and here at Woodford I grow it in a south-east aspect, where it receives the whole of the sun from early morning to 5 p.m., and, as I write, the diminutive growths are a mass of ruddy blossom points. I grow it in a very free soil composed of sand, leaf-mould, old mortar, finely broken bricks and fibrous loam about fifteen inches deep and superimposed on 6 inches of rough drainage. From March to the end of July I copiously supply it with water, which is, I believe, an essential during their growing season for the successful cultivation of these choicer Saxifrages. When November arrives, and with it the fogs and smoke so well known to the suburban dweller, I erect a roof glass above the patch to intercept the dirt and excessive rainfall.

There is one other point which appears to me to be of considerable importance, and that is a thoroughly compacted rooting medium and very firm planting, while once or twice a year I top-dress with a compost of fine leaf-soil, small grit and silver sand. For this purpose I thoroughly dry the compost and run it in between the tiny growths on a fine, dry day. By this means it is possible to fill up the interstices between the growths in a manner quite impossible if the top-dressing is in the slightest degree moist or the plant clammy. Recently I have tried *S. burseriana* in the moraine, and it seems quite happy among the moist grit.

Some growers propagate this Saxifrage by means of cuttings. If the necessary attention and special skill is not available, a more rapid method of increasing one's stock is to take up a tuft, say, in April, and after shaking out the soil, carefully divide the bunch of fine roots. It will be found quite easy to cut up a patch as large as one's hand into ten or twenty plants, each with ample roots to support it, and if these are potted firmly in the above-mentioned compost and kept moist and "close" for a week or so, they rapidly make sturdy plants. They can, with care, be planted out into the rock garden direct.

R. A. MALBY.

SHRUBBY SPIRÆAS.

By making a selection of shrubby Spiræas it is possible to have a succession of bloom throughout the greater part of the year. One of the first, if not the first, to open its blooms is

Spiræa Thunbergii, producing clusters of white flowers on slender shoots. It is well suited for planting on raised banks. Height, 3 feet.

S. prunifolia flore pleno.—The double white flowers are profusely borne on arching shoots from

1 foot to 6 feet in length. It is a familiar garden plant, flowering in late March.

S. arguta.—The flowering season is from the middle of April till late May (see illustration). Height, 3 feet to 5 feet.

S. ariæfolia.—A strong-growing species, with plume-like panicles of creamy white flowers in June.

S. japonica.—This well-known species produces a succession of flat clusters of very red flowers from mid-June until the autumn. There are numerous varieties, of which the dwarf Bumalda, about two feet high, with heads of deep pink bloom, is one of the best.



SPIRÆA ARGUTA, BEARING CLUSTERS OF WHITE FLOWERS IN SPRINGTIME.

S. Douglasii.—In July and August this is one of the most charming of the shrubby Spiræas. The flowers are deep rose and freely borne on a dense mass of closely packed shoots.

S. lindleyana.—A very beautiful Himalayan species with white flowers disposed in large terminal panicles. The flowering season is September, and it grows to a height of 6 feet or 8 feet. Unfortunately, it can only be recommended with safety for Southern gardens. In Devon and Cornwall it grows luxuriantly. With this exception, all of the foregoing are perfectly hardy, and may be grown in any good garden soil.

SWEET PEAS FOR GARDEN DECORATION AND CUTTING.

AMONG annuals there is none to rival Sweet Peas for cutting, and during the last ten or fifteen years their rapid rise in popularity has added considerably to the attractiveness of our garden borders. The reason for this is not far to seek. In the first instance, the seeds are very cheap to purchase, no annual is easier to grow, and the plants produce quantities of flowers in almost every shade of colour. While for the purposes under discussion it is unnecessary to study the details of cultivation so closely as must be done to gain honours on the exhibition table, the main points must be followed if we are to get the best results from the plants to brighten our gardens and homes. Practically any garden, within reason, in town, suburb and country on which the sun shines in this isle will grow, or may be made to grow, Sweet Peas. The worst to deal with is a small, confined and stuffy town garden. Trench the ground 2 feet deep in autumn or early winter, and work in plenty of old decayed manure. In many gardens this will be sufficient soil preparation; in others much more must be done if success is to attend our efforts. Very light soils should be improved by adding plenty of cow-manure and top-spit loam. Heavy clay soils will benefit by frequent working and throwing up roughly in winter for frost and rain to improve it. Sand, road grit, wood-ashes, leaf-mould and basic slag will all assist to improve clay soils.

The Time to Sow Seeds.—To produce a display or supply of blooms over a long season from the end of May to October, it is necessary to make at least three sowings—October (or September in the North), February, and the end of March. For preference the two earlier sowings should be made in a cold frame or cool greenhouse, removing the plants later when about an inch high to a cold frame; and the third sowing outside.

Sowing Outside.—The drills or rings in which Sweet Pea seeds are to be sown should be about three inches deep, this amount of soil being covered over the seeds when sown. To facilitate watering in summer on light soils, the rings or drills may be prepared 3 inches or 4 inches lower than the general level of the garden. Sow the seeds thinly; it is waste to do otherwise, because later the young plants must be thinned to not less than 6 inches apart. Some growers prefer nearer a foot. The question of clumps *versus* rows of Sweet Peas is an oft-discussed point, the answer being that excellent flowers are obtained by both methods, always

providing that the plants in the rows have ample space in which to grow. When large quantities of flowers are required, rows are preferable; but for artistic effect in borders, groups or clumps of varying sizes, according to the width and length of the border, are the best. There is no better place for a row of Sweet Peas than planted as a screen to separate the vegetable garden from the flower garden. Much has been said and written about supports for Sweet Peas, yet nothing has been found to equal sticks to secure an artistic effect, and they should be used if obtainable at a reasonable price, those of Hazel being the best. The average height of the stakes required will be from 6 feet to 9 feet, according to the nature of the ground and the position.

Mulching with some old decayed manure during June, watering with clear water in dry weather, and occasional applications of liquid

and cutting. The orange pinks when Henry Eckford and Earl Spencer were first introduced did not cover themselves with glory in the border; but now we have Barbara and Melba, which are both satisfactory. It would be very difficult to find two growers in agreement respecting the twelve best sorts. The following are all first rate: King White, Clara Curtis, Barbara, Scarlet Emperor, R. F. Felton, Mrs. E. Cowdry, May Farquhar, Rosabelle, Elfrida Pearson, Edith Taylor, King Edward Spencer and Agricola.

A. O.

FIVE GOOD SWEET PEAS.

COLOURED PLATE 1487.

AMONG Sweet Peas of comparatively recent introduction, the five shown in the coloured

good constitution and the flowers do not burn so badly in the sun as many of this hue. They are well placed on the stems and a good bunch is very effective, either in the exhibition tent or used for house decoration. It received an award of merit from the Royal Horticultural Society in 1912.

Dobbie's Cream.—As its name implies, this variety, as well as Melba, was sent out by Messrs. Dobbie and Co. There are now quite a number of cream varieties, but the one illustrated will take a lot of beating. It is a very free-flowering Sweet Pea, and for that reason is very effective in the garden, while for show purposes it leaves nothing to be desired.

R. F. Felton.—Those who saw the magnificent bunches of this variety staged at the National Sweet Pea Society's exhibition last year are not likely to forget them. It is a very large flower of a varying shade of blue, the blooms being large



A BEAUTIFUL ROW OF SWEET PEA KING WHITE, WITH WHITE CANDYTUFT ON THE OTHER SIDE OF THE PATHWAY.

manure will assist in the production of vigorous growths and large, richly coloured flowers, borne on long stalks over a lengthy period. When cut frequently, there will be no flowers left to seed; but any that remain and fade on the plants must be removed, leaving a few pods, perhaps about the beginning of August, to mature sufficient seeds for home sowing, though it is doubtful economy when seeds are so cheap to purchase.

The Best Varieties.—The question of the best sorts for garden decoration and cutting can be dismissed in a few lines. Much more interest and pleasure is obtained from an up-to-date collection of named Sweet Peas than by growing the same sorts year after year. I have yet to see the Sweet Pea that holds a high place at exhibitions to-day which is unsuitable for the border

plate presented with this issue occupy a high position. They are all good for garden decoration and for exhibition.

Rosabelle.—This was raised by Mr. A. Malcolm and put into commerce by Messrs. E. W. King and Co. It is one of the prettiest of its colour. The flowers are large and good, and placed well on the stout, erect stems. It may best be described as a giant Marjorie Willis.

King Manoel.—Among Sweet Peas of dark maroon colour, this is a giant. The plants have a vigorous habit, and the blooms are of excellent substance. It was raised and distributed by Mr. George Stark.

Melba.—This is an exceptionally dainty and charming flower, the soft salmon orange tint always appealing strongly to ladies. It has

and well poised on the stems. It was raised and sent out by Mr. Robert Bolton, and last year was awarded the National Sweet Pea Society's medal as the best new variety sent to the trials in 1912. Under the society's rules it had to be grown at the trials last year to see if it remained true before the medal could be awarded.

SWEET PEA KING WHITE

This beautiful variety, shown in the accompanying illustration, has already won high honours, having secured an award of merit from the National Sweet Pea Society and the Royal Horticultural Society. It has very large flowers of excellent substance, and is being introduced by Messrs. Alex. Dickson and Sons, Hawtmark, Belfast, and Messrs. W. A. Burpee and Co., Philadelphia, U.S.A.

ROSE-GROWING IN TOWN GARDENS.

Ramblers and Their Uses.—In dealing with rambling Roses, of which there are a great number of species and hybrids, we have to consider, first of all, the purpose for which they are required. Those which do excellently as pillar Roses, or will clothe and cover arches and pergolas most effectively, often resent contact with walls; and, on the other hand, many which show to advantage where all the shoots are trained against a flat surface do not produce fresh growths freely enough to make them really useful for other purposes. The ramblers most generally selected are the wichuraianas and those of the multiflora scandens type. Both of these classes are immensely popular, and they include all the finest varieties a town gardener can employ for covering his arches and pergolas, and will also do exceedingly well when fastened to tall pillars. They have, unfortunately, a comparatively short flowering period (with few exceptions), but in that time produce such masses of bloom, and are, moreover, of such fine vigour and habit, that no one need hesitate to plant a few.

The Best Varieties.—The wichuraianas are generally to be preferred on account of their greater immunity from fungoid diseases, and of these there are so many good sorts that selection becomes a difficult matter. The following are all reliable: Hiawatha, single, crimson, white centre; Lady Gay, rose pink; Alberic Barbier, creamy yellow; Coquina, single, pink shaded; Leontine Gervaise, salmon rose, tinted yellow; Débutante, light pink; Jersey Beauty, single, creamy yellow; Excelsa, rosy crimson; Gardenia, light yellow to cream; and White Dorothy Perkins. All of these do well in towns, and many might be added to the list. Lady Gay is, I think, better than Dorothy Perkins, to which it is very similar, for though the latter has but little tendency to mildew, the former is practically proof against it, and in addition the flowers are slightly larger and a shade deeper in colour. The main pruning of wichuraianas should be undertaken as soon as possible after the bloom is over, and completed before the end of the autumn. This consists in cutting out from the base as many of the old shoots as can be spared. The strong, new growths are then tied into place to provide the bloom for the succeeding season, and where there is a superabundance of these, the weakest should be removed. In the spring little remains to be done beyond removing some of the late-started growths which have not matured and arranging those that are retained so that they will have as much air and light as possible. Newly planted wichuraianas should be cut down at once to within a foot of the ground, the object being to induce plenty of strong growth from the base. In dealing with climbers of all kinds, one must be prepared to sacrifice the bloom for the first year, and by so doing a great deal of time will be saved in getting the plant established satisfactorily.

Other Ramblers.—I have already hinted that the multiflora scandens class is less desirable, at all events to the town gardener, than the wichuraiana. Crimson Rambler, the most widely grown in this section, is anything but a good town Rose, for not only is it subject to mildew, but it is also liable to attacks of black spot. Blush Rambler, one of its progeny, is seemingly free from these weaknesses, and is a very beautiful Rose for an arch. Mrs. F. W. Flight (pink, semi-double flowers) is also good. Tausendschön (rose pink) is very pretty and distinct, but too

quite worth growing, though the colour is scarcely striking. Perpetual Thalia (white) blooms again in autumn.

The pruning of multifloras follows closely that of the wichuraianas, except that we get more of the following laterals or strong non-flowering shoots springing from the middle of other growths, some of which must be retained. Basal growths are seldom as numerous, and one can defer cutting out those which have to be discarded until the winter, which, of course, must be done in the case of the perpetual-flowering kinds. One other Rambler is of the greatest use in towns; that is the sempervirens Félicité Perpétue. This is a Rose for a bad spot, and it is safe to say that it will thrive where very few others would exist. Bleak or draughty gardens seem to suit it, and it is even at home on a wall facing north.

Wichuraianas seldom do well on walls or fences, and multifloras are even less suited for this purpose. When it is particularly desired to cover up a fence with the former, the best method is to train the stems up about a foot away from it, securing them to stout stakes, and they may then be carried and trained on to a trellis or wire-work above the fence. But there are many Roses better suited for such a position, with which I will deal in my next article in the issue of February 28. P. L. GODDARD.

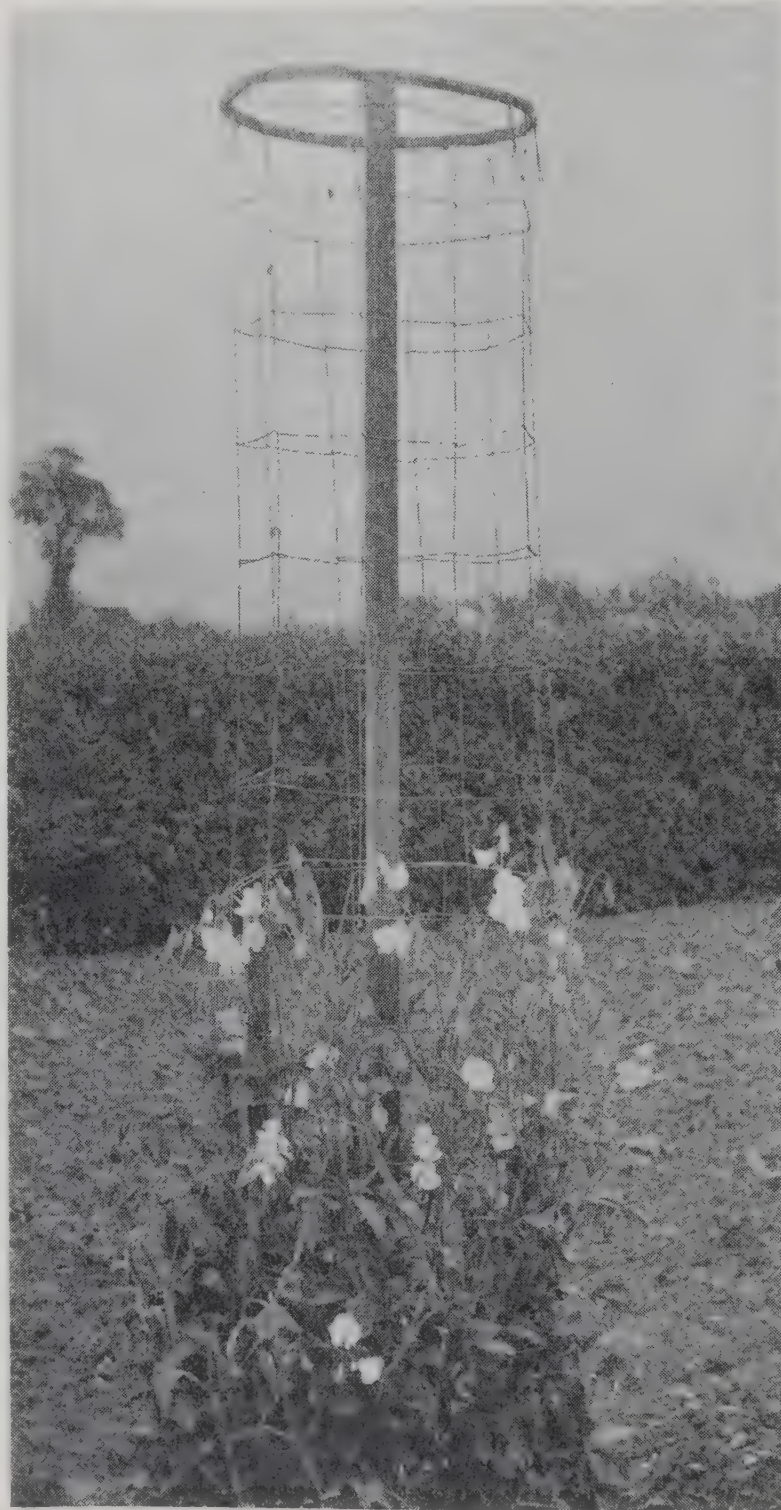
THE STAKING OF SWEET PEAS.

MUCH of the disease now prevalent among Sweet Peas, in the opinion of the majority of experts, could be overcome if more attention were given to the prevention of checks during the early growth of the plants. Checks due to climatic influences cannot be held in control, but those resultant from cultural neglect need not occur. Experiments and observations prove beyond a doubt that the plants immune from disease during the flowering period (when the disease is so rampantly apparent) are those in which, from the first, a steady, sturdy growth has been maintained.

A Prolific Cause of Trouble is failing to supply adequate support to the young seedlings, which, in many cases, are allowed to fall over the sides of the seed pots or boxes and become injured, or they are matted together in a tangled mass of entwined tendrils, and separation for planting out cannot be accomplished without injury to practically every seedling. Is it small wonder that such plants fall

a prey to the ravages of disease, when, as seedlings, their constitution has been wrecked through careless neglect?

Early Support Necessary.—Directly the first tendril appears on the seedlings, the plants must be given supports of some kind, and for this purpose I know of nothing better than the twiggy tops of Hazel sticks, round which the young tendrils quickly enfold themselves. If the seedlings receive cool treatment, strong, stiff, erect growths will result, and when the plants are 5 inches or



I.—A CLUMP OF SWEET PEAS TRAINED ON SIMPLICITAS NETTING.

apt to mildew. Tea Rambler, as its name implies, claims kinship with another section, in which it was originally classed, though the habit is that of multiflora. It is best suited for a wall, and I will refer to it again in dealing with Roses for this purpose. The multifloras already include some important breaks in the direction of continuous-flowering kinds, but these are at present rather in the nature of a promise of good things to come than a realisation of the ideal. Trier, the first of these to arrive, is very perpetual and

6 inches in height, they can be planted out. Longer twigs should supplement those already in use, and these should be such as will uphold the plants until they reach the larger supports used for the flowering period.

The Final Staking.—For the final staking, having experimented with many substitutes, I consider Hazel or Elm sticks the most satisfactory, and so long as I can procure the sticks I shall keep to this old-fashioned plan.

Method of Staking Rows.—The tallest and twiggiest sticks should be firmly inserted in the soil to the depth of 9 inches or 10 inches on either side of the row. These may be arranged in either an upright or a slanting position. Personally, I prefer staking obliquely, as fewer sticks are needed, and, if the main growth be tied in, the breaks develop vigorously and a well-filled-out row of Sweet Peas is obtained. To guard against the ravages of strong winds, it is best to insert stout stakes at intervals in the rows, and connect these with wires woven through the sticks.

Clumps of Sweet Peas.—For staking clumps in the flower border nothing equals sticks. The newest and twiggiest ones should be neatly and carefully arranged, and these will harmonise well with all other surrounding shrubs or flowers. But sticks are not always to be had, therefore some substitute must be used. Fig. 2 shows an excellent arrangement made with thin Bamboo canes, two stout stakes and three wire hoops, and I think it is the most satisfactory substitute for natural stakes, both from the point of view of utility and artistic merit, and also that of economy, as the materials needed to make the circle will last several years, and can be easily put up or taken down. The materials required are two strong stakes 9 feet or 10 feet long, which should be firmly driven into the ground about twenty inches apart, and then three hoops put over them—the first hoop a foot from the ground, the next midway up, and the third fastened securely near the top. Then ten or twelve 10-foot Bamboo canes are arranged at intervals of 4 inches or 5 inches around the hoops and securely tied to them. During the growing season, if the shoots are tied in as often as necessary, excellent clumps will be obtained.

Wire-Netting of large mesh arranged in a circle round the stakes may be used instead of the canes; but I experienced complete failure with it, as it has the disadvantage of becoming very hot under the sun's rays and burning the plants, thereby causing injury. For this reason it is the least desirable of the substitutes for sticks, although many growers use it, as it keeps the plants well under control. The *Simplicitas* Patent Netting for all climbing plants is easily fixed and removed, and will serve for several years. For Sweet Peas in rows I found it excellent, and Fig. 1 well illustrates a clump of Sweet Peas thus trained, showing the advantages of the netting and also its one fault of "sagging." I found that birds did not like the see-saw they experienced when alighting on it, therefore the plants were left alone, quite a point in favour of the netting.

The foregoing notes refer chiefly to Sweet Peas grown for decorative and garden purposes; but whatever method be used, it is essential that the staking be done thoroughly. Exhibitors who cultivate their plants on the cordon system find that Bamboo canes or wires stretched upon a framework are more useful for their purpose than sticks, as the plants are denuded of every tendril and each stem is trained separately. Of course,

the initial outlay is somewhat great, for iron or wooden frames form the end supports and wires are stretched from end to end, and to these the 10-foot or 12-foot Bamboo canes are securely fastened. For keeping the stems in position, galvanised rings, easy to fasten, are now procurable. Users of them during the past season are loud in praise of their utility, and declare them to be almost indispensable. This method of culture requires daily attention, for the plants are kept rigidly disbudded, one, two, or three leads being allowed to each plant. Flowers obtained by this method are of enormous size, and, by the "honours" they win, repay the necessary outlay of money and care. However, the small grower with limited time and means who grows only for garden display will be well advised to use the substitute as illustrated in Fig. 2, and if he is unable to go to the trouble of tying in refractory growths, these can be kept in by winding some twine round and round the canes at intervals of a few inches, to which the tendrils will readily cling, although the effect of the clump is impaired thereby.

In conclusion, I tender my thanks to Messrs. Dobbie and Co. for their kindness in allowing me to illustrate these notes from photographs taken at their seed farm at Mark's Tey, Essex. S. M. CROW.

SWEET PEA HINTS FOR BEGINNERS.

PREPARE the ground as early in autumn as convenient. Trench as deeply as possible. If there is very little depth of good soil, take out

some of the subsoil and add any other good earth—"mellowed" top spit for preference. Use mixed farm-yard manure, at least a year old, bone-meal and soot throughout the spits, except in the top spit, in which use only bone-meal and soot. Keep the original top spit as the top spit. Tread all firmly except the top 6 inches or so. Ridge the soil at the top—two or three times during the winter will not hurt. Give a dressing of basic slag and a little kainit (a good lot of the latter if the soil is light) early in winter; sulphate of potash in spring.

Get good seed—much preferably English grown.

Chip all seeds and sow in sandy soil, except "white" and grizzled or wrinkled seed, which should be sown in a pocket or depression about half an inch deep, made with the point of the finger and filled with sand.

Sow in autumn in pots during the second week in October. Place a few half-decayed leaves over the crocks and three-quarters fill with good top spit soil and a little leaf-mould. The top quarter should be rather poor soil. Winter in frames. Pots to be sunk to the rims in ashes. Put a good number of pieces of Carrot among the pots and look at them at night with a light; kill all the slugs seen.

Pinch the leader to induce lower buds to grow out strongly in early spring, *not* in autumn.

Do not wait till after planting out to begin to kill slugs. Place small heaps of bran on the sites (where Sweet Peas are to be grown) during autumn and winter, and in mild weather visit them at night with a lantern and kill all the slugs seen. I kill thousands of slugs during the winter months. I have satisfied myself long ago that frost does not kill them. I am pretty well certain that they dodge the cold weather by going down the worm-holes.

Plant out about mid-April when the weather is favourable. Plant *very firmly*, but allow the top 2 inches or so of soil to be loose. Allow the weeds to grow on either side up to within 6 inches or so of the plants until the Sweet Peas are about one and a-half feet high. This will sound like preaching madness, but slugs feed on weeds, and if the soil all around the plants is kept bare, they have nothing else to eat and are much more likely to "go" for the Sweet Peas. Do not thin out, disbud or train until the haulm is about fifteen inches high, if growing for exhibition.

HAMMOND T. HINTON.



2 SWEET PEAS TRAINED ON A CIRCLE OF BAMBOO CANES.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Cherry Trees in Pots.—The early started trees will now be in bloom, and should be freely ventilated until the flowering period is over. Shake the trees several times during the early part of the day in order to disperse the pollen, and only employ sufficient fire-heat to keep the house free from frost.

Melons.—The earliest plants will now be growing freely, and may be stopped before they reach the top of the trellis, as by this means numerous side shoots will be produced, and on these the young Melons will soon be noticeable. When sufficient fruits are set, they should be regulated to three or four on each plant. Keep the growth well thinned in order to admit light among the foliage, but do not stop too many shoots at one time. Water freely when necessary, but avoid dabbling, as this is almost sure to prove fatal. Shut up the house early in the afternoon, lightly syringing the foliage at the same time. A night temperature of 70°, rising to 85° by day with sun-heat, will suit them well. A second plantation should now be made, and another sowing of seeds placed in small, clean pots for succession.

Pot Vines.—If these were started in November, the Grapes will now be well forward and have commenced to stone. During this period the temperature should not exceed 70° at night, for, while the seeds are in course of formation, there is a great strain on the energy of the plant, although growth may seem almost at a standstill. Be very careful in giving water at the roots, for if once allowed to become too dry, the crop will suffer seriously. When the berries recommence to swell, give liberal supplies of manure-water at the roots. Guano is one of the best manures for this purpose. Keep the foliage well regulated and shut up the house early in the afternoon, damping the floor and walls at the same time.

Plants Under Glass.

Caladiums.—The tubers may now be started into growth, either in boxes or small pots, and as soon as sufficiently advanced they should be potted into larger pots and placed on a gentle hot-bed, as by this means growth will be much stronger than if the plants are grown on an ordinary stage.

Achimenes.—Batches of these should be started in heat from now till the middle of April. Shake each variety out of the old soil separately, and plant the tubers in a compost of fibrous loam, peat and leaf-soil in equal parts, with sufficient rough sand to keep the whole in a porous condition. They are well adapted for growing in baskets hanging from the roof of a warm conservatory, or they may be cultivated in pots; but in this case thorough drainage is indispensable, and the addition of a little charcoal to the soil will be an advantage. Place the baskets or pots near the glass and syringe frequently with soft water until growing freely, when a thorough watering should be given.

Sweet Peas in Pots should not be allowed to become stunted for want of potting, but let the plants be carefully placed in larger pots in a compost of turfy loam and a little decayed cow-manure. A well-ventilated structure with plenty of light is the only place to grow them to perfection or early flowering. A few fine twigs should be placed in each pot to keep the plants in an upright position. Manure-water may be freely given when the pots become well filled with roots, also plenty of air may be applied.

The Flower Garden.

The Subtropical Garden.—The plants for this part of the garden should be raised or increased during the present month. Sow seeds of Ricinus, Jacarandas and Eucalyptus. Such plants as these afford a happy relief from the usual summer bedding, and may be intermixed with Lilies that flower during the summer and autumn. Hyacinthus candicans, large-flowered Cannas, Adiantum and Montbretias may all be associated with them.

East Lothian Stocks should now be ready for potting into 3-inch pots. Good rich soil should be used, and the plants grown in a slightly heated

pit; harden off as soon as large enough, and plant out during April.

Hardy Fruit.

American Blight on Apple Trees.—The present is a good time to destroy this pest, and one of the best remedies for the purpose is soluble paraffin; but a great deal depends on the way in which this or any other remedy is applied whether it will be a success or not. The preparation should be thoroughly worked into the affected parts of the tree with a hand-brush. Spraying or syringing is simply a waste of time and material, as far as this pest is concerned.

Spraying Orchard Trees.—Where trees are infested with lichen, they should be sprayed with some approved solution, and this should be done before the trees start into growth. For small orchards the "Knapsack" Sprayer is the best; and a quiet, still day should be chosen for the purpose. The operator should wear long rubber gloves.

The Kitchen Garden.

Sowing Seeds.—As soon as the state of the soil will permit, a sowing of some of the earliest subjects should be made. Turnip Early Milan may be sown on a warm border with as little delay as possible, but only a small quantity should be sown at this early date, as many of the plants are likely to run to seed. The main crop of Broad Beans may also be sown now, and hardy kinds of Peas sown at this date should be ready to gather by the third week in June. For this purpose, nothing among early Peas will give more satisfaction than The Pilot, 3½ feet. Brussels Sprouts may now be sown in the open, also Cabbage, Cauliflower and Leeks. Lettuce sown in the open now should be ready to cut in the first week of June. Pioneer, May King and Balloon are good for this purpose. Carrots may also be sown in the open for pulling in June.

Globe Artichokes.—The present is a good time to make plantations of these. Let the ground be trenched and manured, plant suckers from the best plants, and allow a space of 4 feet between the plants each way.

Potatoes may now be planted in cold pits or under a south wall, where protection can be given without causing an eyesore.

Radishes may now be sown on a south border and protected from birds by netting.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Plans for Cropping.—At this season of the year it will be well to make a rough sketch of the vegetable quarters and arrange the plots for the season's cropping. This will prove very helpful during the busy season, for, as spring advances, one has usually more to do than one can find time for. Many gardeners grow such crops as Carrots and Onions year after year on the same ground, and still get very good results. As a rule, however, it would not be wise to recommend this plan. Such crops as Potatoes, Leeks, Carrots and Beet should be followed by Peas, Beans, Onions and most of the Brassica tribe.

Shallots.—If one can get the soil into working order, no time should be lost in getting Shallots planted. The ground will require to be moderately firm, and plant the bulbs almost on the surface, only sufficiently deep to keep them in position.

Chives.—Where the Chives have got overgrown, the present will be a suitable time to make a fresh planting, which should be on well-prepared soil. Too often this useful vegetable is neglected, and, being much earlier and milder than Onions, it is a grand substitute for that crop for soups and salads.

Seakale.—Roots secured from the forcing crowns may now be placed in boxes of sand and stood in a cool Peach-house. These will soon commence to grow, and will be ready to plant out some time in March.

The Flower Garden.

Carnations.—Border Carnations which have been wintered in cold frames may be planted

any time now, provided the soil can be got into a fit state. The late Mr. Martin Smith told the writer that, in preparing ground for planting Carnations, if one could make an impression with the foot, it was not firm enough. Personally, I prefer planting in October; but this is not always convenient, or, I dare say, advisable, as some experience great difficulty in keeping them through the winter.

Dianthus.—These will make a fine show, and with very little expense. As advised for Carnations from seed, great care will be necessary to prevent the young seedlings from becoming drawn, which will render them almost useless. Sow now in moderate heat.

Petunias.—If one wishes to make a display of these beautiful annuals, it will be well to make a sowing towards the end of this week. If time and space permit, grow them on in pots instead of boxes, and the little extra trouble will amply repay one.

Lobelias.—With the more free and easy style of bedding now being adopted, Lobelias may very well be grown from seed instead of cuttings. Seed sown now will make fine plants by May. Should flowers appear before bedding-time, they ought to be cut off, which will materially prolong the flowering period out of doors.

Kochia trichophylla.—In favoured districts this will be found to make very interesting and effective dot plants among the lower-growing subjects in the flower garden. Sow the seed now and grow on in pots, keeping the plants near the glass.

Plants Under Glass.

Vallota purpurea.—At several important flower shows last autumn I saw this grand old favourite exhibited more than usual, and one was pleased to come across it again. Many made a note of it, doubtless with a view to adding it to their collection, and I consider it worthy of a place among the best of greenhouse plants. It is important at this season to see that it does not suffer from the want of water; this has been the cause of many failures.

Calceolarias.—These extremely decorative plants will now be ready to be potted into their flowering pots, which should be 8 inches to 10 inches, according to requirements. They should not be potted too firm, and as they begin to fill the pots with roots, feeding should commence. It is surprising in well-grown plants what an amount of artificial feeding they will stand. Continue to keep the plants near the glass without coming in contact with cold winds.

Gardenias will now be showing flower-buds, and may be treated liberally in the way of manure. If planted out, it is a good plan to mulch with farmyard manure. Pinch all growths that appear round the bud; these are often the cause of the latter not opening properly.

Bougainvilleas.—Where these are grown on the roof of the plant stove, they should now be pruned back and thoroughly washed. A good syringing with Quassia will generally rid them of green or black fly, to which they are very subject.

The Hardy Fruit Garden.

Planting.—All hardy fruit may still be planted, but it will not be wise to defer this work much longer, as late-planted trees never get the same chance to recover from the shift. In any case, recently planted trees should have a mulching of stable litter placed over the roots to protect them from late frosts. Pruning and nailing of all wall trees should be completed now.

Early Pears.—Some of the earlier varieties will be showing flower, especially on sheltered walls facing south. These should be protected either by herring-nets or some branches of Yew tied on to the trees.

Fruits Under Glass.

Vines in houses closed down last month will now be beginning to move, and the temperature may be slightly increased, but by no means excite them unduly at this stage. After this date the later varieties will show signs of moving under the influence of the sun. When this is the case, it will be as well to close them down and let them come on gradually.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON VEGETABLES.

French Beans.—A batch of seeds of these quick-growing plants should be sown in a started vinery, or in a Melon or Cucumber house where a warm, moist heat of 60° is available. Two methods are adopted by growers. One, which I prefer, is to sow five Beans in a 3½-inch pot in light soil, transferring these wholly to an 8-inch pot when the first rough leaf is formed. The plants, if handled carefully, grow away rapidly. The second plan is to sow the seed in 8-inch pots at once, half filling the pots, and earthing the plants up as they grow. This method entails more space than the other at the start, which may not be always convenient. A compost of loam and leaf-mould in equal parts will suffice, with but a moderate quantity of water for a start, increasing it as growth proceeds and supplying liquid manure frequently when the Beans are forming. Osborne's Forcing is still a good early kind; while Ne Plus Ultra and Canadian Wonder are excellent for later sowing.

Potatoes in Pots.—This is a convenient method of obtaining an early supply of useful tubers, because they can be moved from place to place quite easily. A Peach-house or vinery just started affords a suitable site for a start, and, until the growth is several inches above the soil, any dark, warm place will serve the purpose. Pots 12 inches in diameter will suffice. Place one tuber in each pot half filled with soil, which should be of a light, leafy character. Add more soil as growth proceeds, and give an abundance of water when growth is being freely made. As to varieties, none is better than Ringleader, Myatt's Ashleaf, or Sharpe's Victor, with May Queen to follow.

Peas in Pots and Boxes should now be sown for succession and early planting outside. If sown now in slight heat, hardened off, and grown sturdily in cold frames until suitable weather arrives for putting them out, such sowings will produce better results than the earliest sowings in the open. If sown in 3½-inch pots with five seeds in each they are easily transferred to the open, which is also the case if sown in ordinary cutting-boxes with a light, leafy compost, to which the roots cling, rendering the start again into growth more rapid. A second sowing in ten days' time in boxes stood under a south wall outside will succeed those sown in cold frames, and will come along rapidly. Those of a Marrowfat type are the most desirable; Pilot for early use, with Duke of Albany to follow later, and Alderman, Edwin Beckett, Centenary, and Prizewinner in between.

Brussels Sprouts.—To obtain a continual supply of firm Brussels Sprouts, a long season of growth is an absolute necessity. The ordinary way of sowing the seed outside with the bulk of the Brassica tribe at the end of March or early in April does not apply to Brussels Sprouts for a full and early crop. To obtain plants from 3 feet to 4 feet high of the stronger-growing varieties like Exhibition, which provide Sprouts at the end of October in quantity, a pinch of seed should be sown in sandy soil about the third week in February in gentle heat under glass. When the plants are well above the soil, move them to cooler quarters to induce a sturdy habit of growth. When they are large enough to handle, prick them out, 3 inches apart, into boxes or a made-up bed of light soil in a cold frame. Encourage free yet sturdy

growth, and when 5 inches high the plants should be put out into their permanent quarters, lifting each plant with a trowel, retaining a nice ball of soil about the roots, which should be watered before lifting. To grow Brussels Sprouts, the soil should be trenched at least 2 feet deep and heavily manured some months previously.

Swanmore Park, Hants.

E. MOLYNEUX.

CLASSIFICATION OF SWEET PEAS.

WE quote the following from the National Sweet Pea Society's Annual for 1914, a publication that ought to be in the hands of every lover of these fragrant flowers. Particulars concerning it will be found on page 77. The list of too-much-alike varieties referred to is published in the "Annual": "The floral committee presents the following as an up-to-date selection of varieties placed in alphabetical order. The committee wishes to draw the attention of members to the list of too-much-alike varieties before selections are made, because in some colour sections the varieties recommended may be so nearly alike that they cannot be shown together in the same competitive exhibit at the society's exhibitions. * Indicates a grandiflora variety; all others are waved.

Bicolor.—Arthur Unwin, Mrs. Andrew Ireland (F.C.C. 1908) and Mrs. Cuthbertson (A.M., R.H.S., 1912).

Bicolor (Dark).—Marks Tey.

Blue (Light).—Anglian Blue, Flora Norton Spencer and Princess Mary.

Blue (Dark).—Blue Jacket, Lord Nelson Spencer and Mrs. G. Charles.

Blush (Pink).—Lady Evelyn Eyre, Mrs. Harcastle Sykes (A.M., 1905) and Princess Victoria (A.M., R.H.S., 1907).

Blush (Lilac).—Agricola (A.M., 1912) and Marion.

Carmine.—John Ingman (F.C.C., 1904).

Cerise (Pale).—A. A. Fabius and Edith Taylor.

Cerise (Deep).—Decorator, Kathleen and Rose Diamond. *Cream, Buff and Ivory*.—Clara Curtis (F.C.C., 1909). *Cream (Dobbie's)* and *Majestic*.

Cream Pink (Pale).—Duplex Spencer, Gladys Burt and Mrs. Routzahn.

Cream Pink (Deep).—Margaret Atlee, Mrs. R. Hallam and Prince Edward of Wales.

Crimson.—King Edward Spencer, Maud Holmes and Sunproof Crimson (A.M., 1909).

Fancy.—Charles Foster (A.M., 1909), Coronation and Prince George.

Lavender.—Lavender George Herbert (A.M., R.H.S., 1912), Masterpiece (A.M., 1910) and R. F. Felton (A.M., 1912; S.M., 1913).

Lavender (Pale).—Moonstone, True Lavender and Walter P. Wright.

Lilac.—Dorothy.

Magenta.—Menie Christie.

Marbled and Watered.—Birdbrook, May Campbell (A.M., 1911) and Veronique.

Maroon.—King Manoel, Mrs. E. Cowdy and Nubian.

Maroon Red.—Brunette (A.M., R.H.S., 1912), Red Chief and Victor Unwin.

Mauve (Pale).—Bertha Massey, Bertrand Deal (A.M., 1912) and Mauve Queen (A.M., 1911).

Mauve (Dark).—Mrs. J. C. House, Queen of Norway (A.M., 1906) and Wenvoe Castle.

Orange Pink.—Edrom Beauty (A.M., 1909), Helen Grosvenor and Orange Perfection.

Orange Scarlet.—Edna Unwin (A.M., R.H.S., 1909), and Thomas Stevenson (F.C.C., 1911).

Picotee Edged (Cream Ground).—Evelyn Hemus (A.M., R.H.S., 1907), Helen Williams and Mrs. C. W. Breadmore.

Picotee Edged (White Ground).—Elsie Herbert (A.M., 1906), Marchioness of Tweeddale and Mrs. Townsend.

Pink (Pale).—Elfrida Pearson (A.M., R.H.S., 1910).

Pink (Deep).—Countess Spencer (F.C.C., 1901) and Hercules.

Rose.—Rosabelle.

Salmon.—Barbara (F.C.C., 1911), Inspector and Stirling Stent (F.C.C. and S.M., 1910).

Salmon (Pink).—Isabel and Lady Miller (A.M., 1912).

Scarlet.—Red Star (A.M., 1911), Scarlet (Dobbie's) and Scarlet Emperor.

Striped and Flaked (Purple and Blue).—Loyalty and Suffragette.

Striped and Flaked (Chocolate on Grey Ground).—Senator Spencer and W. B. Beaver.

Striped and Flaked (Red and Rose).—America Spencer, Aurora Spencer and Mrs. W. J. Unwin (A.M., 1909).

White.—*Dorothy Eckford (F.C.C., 1902), King White (A.M., 1912), Nora Unwin (A.M., 1907) and White Queen."

THE CAMPANULAS OR BELLFLOWERS.

[Replies to Criticisms.]

I N referring to the various criticisms upon my articles on the Campanulas, perhaps you will allow me, in the first place, to thank those who have so kindly contributed for their courtesy and for the points of interest and value they have raised. It is indeed difficult in writing on a subject such as the Campanula to steer the middle course and to keep clear of Scylla and Charybdis, as typified by condensation and prolixity. The subject is so great and affords so many critical questions that the temptation to write at length is almost irresistible. But one must remember that all the readers of THE GARDEN are not enthusiasts in the Campanula, and that it were better to err on the side of condensation than on that of undue length. If, however, I have committed the fault of being too concise, this may be overlooked, because it has been the means of bringing several notes of great interest and special value from various cultivators of this charming class of plants.

Taking these in order, I owe very special thanks to Mr. Reginald Farrer, who has both unique opportunities of studying the plants and who can also convey his knowledge in the most attractive fashion. The nomenclature of Campanula Allioni or C. alpestris is, I think, the first point he has raised. In retaining the name of C. Allioni I was only following in a humble way a number of first-class authorities. I endeavoured, as far as possible, to keep to the nomenclature of the "Kew Hand List," and, failing that, of the "Index Kewensis." It is well, I think, to have some authority convenient of access to the many as a court of appeal in such questions as these. It is better to accept such for working purposes rather than to be too strict in nomenclature, especially when the question of priority is concerned. It is quite true that the name of C. alpestris has the priority; but when we find that C. Allioni has consistently held the field for many years, we may well retain it until the "Kew Hand List" is revised. I admit that this is an argumentative question, but it is unfortunate indeed that a plant with a long record under one name should become changed, to the confusion of many. I submit that for one who may be misled into buying a plant as C. alpestris, under the impression that it is different from his old friend C. Allioni, there are ten who would be disposed to complain that when ordering C. alpestris they only obtained our old favourite C. Allioni. I am not prepared to admit that priority should always have the preference. What, for example, of the lovely Crocus iridiflorus? By all the rules of priority it should be C. byzantinus, an altogether misleading name. When we come to the question of the identity of C. cæspitosa with C. pumila or C. pusilla, we touch upon quite different points. In writing of these Campanulas I dealt with them from a gardening standpoint; and from what I had seen of the plants grown under any of these names I was forced to the conclusion that they were practically the same for garden purposes. In this case the "Kew Hand List" differentiates between C. cæspitosa and C. pusilla. Most recent writers on the subject have, however, discarded the distinction between the two, and Mr. Farrer,

with his usual candour, confesses that he himself was an offender as late as last year. His note led to my looking up several references on the subject, and among them I find an excellent paper by Mr. Maurice Prichard on the Campanulas, which appears in the Journal of the Royal Horticultural Society, Vol. XXVII., Part I., 1902. Under the name of *C. pumila* Mr. Prichard gives as synonyms *C. pusilla* and *C. cæspitosa*. In the same publication, Vol. XXXII., June, 1907, there is the report of a paper, "An Annotated List of the Species of Campanula," by Colonel R. H. Beddome, in which, under the title of *C. cæspitosa*, Scop. "Flor. Carn.," second edition, page 143, t. 4 (1772), Colonel Beddome gives as synonymical *C. pusilla*, Hænke, in "Jacq. Coll.," II., page 79 (1788), and *C. pusilla*, Sims, Botanical Magazine, Vol. XV : 512. Colonel

and which is a different thing from that usually grown in botanic gardens by the same name.

With respect to some other Campanulas more briefly referred to, one may say that *C. stenocodon* is rather like one or two of the *C. cæspitosa* forms which I have secured, but which are rather after the *C. rotundifolia* type. Possibly I should have described it in more detail, but space was precious. I see it is generally said to be near *C. rotundifolia*, and perhaps only a delicate form of it. As for *C. tridentata* and *C. Saxifraga*, my experience has been the same as an earlier one of Mr. Farrer, who says, in that charming book, "My Rock Garden," that "they are very likely two different forms of the same species—*Saxifraga* from the Caucasus, and *tridentata* from further South in the Lebanon ranges.

However, the differences between them are of a

THE BEST WHITE, SCARLET AND MAUVE SWEET PEAS.

I THOUGHT perhaps some of the readers of THE GARDEN would like to hear the results of my trials in the scarlet, white, mauve, and lavender shades of Sweet Peas. I have grown my Sweet Peas in clumps in their different varieties, also in exhibition rows, and planted a foot apart. I obtained the following sorts of whites: Etta Dyke, White Queen, White Pearl, Freda, Moneymaker, Florence Wright and Nora Unwin, and planted three plants of each in clumps, giving each the same conditions and treatment in every way. In the exhibition row they were planted in rotation, but six plants of each.

Etta Dyke's great fault is in throwing a lot of plain standards, but it is a very free bloomer and seeder. White Queen is a very strong grower, but all the plants gave way suddenly to streak, the only Sweet Pea out of the eighty varieties I grow to be attacked; it is rather too creamy to be a tip-top white. White Pearl is a very good waved variety, but hardly robust enough, and gave out rather early in the season. Freda is a great pleasure to me, as it throws fours in profusion on very long stems perfectly fixed. I picked flowers from the middle of May up to the end of October; the plants reached over fifteen feet in height. Moneymaker is also very good, with strong, lasting petals. Florence Wright has not been so strong, and has not bloomed so freely. Nora Unwin is still a very fine garden variety, but not so good for exhibition.

Now for the scarlets which I have grown. Scarlet Monarch is not large nor robust enough and only throws threes, but lasts in bloom very well; in fact, it is the best in that respect. Red Star I think the very best scarlet up to date. It throws fours in great quantity, and grows quite 15 feet high. Scarlet Emperor is also very good, but does not throw fours in quantity,

as exhibition varieties must do. Vermilion Brilliant is also a favourite of mine, although its fault with me has been that its blooming season is short. It is a medium grower and quite fixed. Regarding lavenders, W. P. Wright has been very disappointing. I tried two small packets of seed. One I put in a clump, but only three plants grew, and they turned out two dirty whites and a violet maroon. From the other packet I had eight plants. One was a dirty white, another a plain standard Lavender, and the rest quite good. True Lavender has been perfect, all the flowers being pure and good; if there is a fault, it is that I should like to see rather more colour in the blooms. In dark mauves I can pick two good ones, viz., Queen of Norway, which is first class, and Tennant Spencer a very good second. In light mauves, I am just going to mention two which I consider the cream of the lot. R. F. Felton is a very fine grower and throws plenty of fours, but my fancy is Mrs. Heslington, a very robust grower, and I picked blooms with 12-inch stems.

S. ARNOTT.

Pington, Devon.

PLANTING II. 1880-1914



PART OF THE NATIONAL SWEET PEA SOCIETY'S EXHIBITION HELD IN LONDON LAST JULY.

Beddome adds, "generally sent out under the name of *pumila* or *pusilla*."

Going back to an earlier date, we find that Alphonse de Candolle, in his "Monographie des Campanulées" (Paris, 1830), includes *C. cæspitosa*, *C. pusilla* and *C. pumila* under *C. cæspitosa* of Scop., and informs us that *C. pusilla* of Hænke is not distinguishable from *C. cæspitosa*, Scop. The latter is retained by de Candolle as the prior name and the one which is most used. Of course, this does not conflict with Mr. Farrer's discovery of what he calls the true *C. cæspitosa*. But so far as Alphonse de Candolle's views are worthy of respect, he is on the side of those who say that *P. cæspitosa*, Scop., and *C. pusilla*, Hænke, are the same. Of course, this is in conflict with the "Kew Hand List." The authorities for the name of *C. pumila* for the plant are the Botanical Magazine, t. 512, and Roem. et Schultz, Syst. 5, page 96. Schott, Nym. and Kotschy, Analect., Bot. 13, would appear to be the authorities for *C. modesta*. But I believe I now have the plant which Mr. Farrer calls the true *C. cæspitosa*.

minute nature, and they may be treated as one in the garden." Again, in that delightful compendium of information, "The Rock Garden," Mr. Farrer says: "*C. tridentata* (to include *C. Saxifraga*) is a valuable, easy, Levantine plant." Then Colonel Beddome says that *C. Saxifraga* is "a pretty species, very near *tridentata*." I appear to have gone astray in speaking of *C. valdensis* by itself, as, on the authority of the "Kew Hand List," it is a variety of *C. linifolia*, which it treats as a distinct species from *C. rotundifolia*. Where authorities differ, where can light be found?

The point of *C. pumila* being a lime-hater has occasioned some most valuable correspondence. I must, to some extent, admit that I have largely followed tradition in my treatment of this plant by avoiding lime. One could say a great deal more on the different questions which have been raised, but the points omitted must be held over. I have already made too great inroads upon space.



SOME GOOD
SWEET PEAS.

- | | |
|------------------|-------------------|
| 1. Rosabelle. | 2. King Manoel. |
| 3. Melba. | 4. Dobbies Cream. |
| 5. R. F. Felton. | |

THE GARDEN.

No. 2205.—VOL. LXXVIII.

FEBRUARY 21, 1914.

NOTES OF THE WEEK.

A Miniature Daffodil.—Just now the dainty little flowers of *Narcissus minimus* are unfolding in the outdoor garden, opening as it were the Daffodil season. It is impossible to praise this perfect little gem too much. It is a true trumpet variety, yet it is but 3 inches high and not more than half an inch in diameter. The colour is rich yellow, and for planting in little nooks in the rock garden or other sheltered places we know of nothing more pleasing. It is a native of Spain, and should be freely planted where early outdoor flowers are appreciated.

Transplanting Alstroemerias.—The genus *Alstroemeria*, or Herb Lily, was at one time much more largely grown than it is at present. Why the plants have dropped out of favour is not easily understood, for few plants need less attention to grow them successfully, either in pots or in the open ground. The present time is the most suitable for transplanting them. The ground should be well trenched and the tubers placed from 6 inches to 9 inches deep. They seldom succeed if planted near the surface. When once established they will continue to brighten the garden for many years, and the handsome flowers are excellent for cutting, remaining fresh for a long time.

An Attractive Acacia for a Small Greenhouse.—The Silver Wattle (*Acacia dealbata*), better known to many people as *Mimosa*, is undoubtedly the best of the genus, and is an excellent plant for helping to furnish a large conservatory where it has room to grow into a good-sized tree. But those who possess only a small greenhouse will find a very valuable substitute in *A. longifolia*. Plants of this beautiful species can be grown in pots, and will flower in a small state from 2 feet to 3 feet high and upwards; they are very ornamental with their graceful sprays of flower intermixed with the beautiful blue *Coleus thyrsoideus*. By cutting back the *Acacia* as soon as the flowering period is over, dwarf, compact plants can be obtained.

Lachenalias in Small Pots.—February being the month when with cool greenhouse treatment these bulbs are in flower, we would like to call our readers' attention to their value as plants to grow in dwarf pots. Nine or ten bulbs in a 6-inch pot make a fine show. They are a welcome change from the usual spring flowers, and, what is a strong point in their favour, they are very lasting when in bloom. Some of the newer varieties, such as *Brightness*, *John Geoghagan*

and *Shiner* among the claret-edged kinds, and *Rose Barton*, *His Reverence* and *W. E. Gumbleton* among the green and the yellow ones, are distinct advances on most of the older sorts. *Cawston Gem* and *Nelsonii*, however, still hold their own. The six new varieties just mentioned were all raised by Sir Frederick Moore at Glasnevin.

new surface. Hyacinths are among the number of those which are thus affected, and it was our seeing a collection in which this was very marked that has led us to insert this warning. The only safe plan is to bury all new pots in the ground for six or eight weeks before they are used for the first time. This effectually removes their sting and makes them as harmless as old ones.



NARCISSUS MOSCHATUS OF HAWORTH, A SMALL-FLOWERED VARIETY SUITABLE FOR THE ROCK GARDEN.

Narcissus moschatus of Haworth.

This small white Spanish Daffodil created a deal of interest when shown in quantity by the Wargrave Plant Farm at a recent meeting of the Royal Horticultural Society. It is a miniature Daffodil with a creamy white trumpet, attaining a height of about nine inches. This variety is recommended for the rock garden, and when planted in nooks among the rockwork and left undisturbed will become established and make a charming show. It is also adapted for naturalising on grassy slopes facing North in partial shade.

The Government and Horticulture.

The first report of the horticulture branch of the Board of Agriculture has just been published, and gives us a good insight to the work that is being done by this newly constituted branch. So far, plant diseases appear to have been the principal items dealt with, and it is a good sign to find that active steps are being taken to stamp out such as Gooseberry mildew, wart disease of Potatoes, Larch sawfly and the silver-leaf disease. The export trade in agricultural and horticultural produce is also receiving serious attention, and on the whole the report is a satisfactory one. Copies can be obtained through Messrs. Wyman and Sons, Fetter Lane, E.C., price 2s. 2d. each.

Sowing Hollyhock Seed.—Owing to the disease affecting these noble plants for many years past, the method of propagating them by cuttings has almost died out. The best way to ensure a good display of flowers is to treat

The Danger of New Pots.—It is very probable that the deleterious effects of new pots on the roots of certain plants are unknown to some of our readers. Most people are content to soak them in water before using them for the first time, in order to prevent undue absorption of moisture from the soil. This operation, however, does not remove the offending something that causes the roots to turn brown and ultimately decay wherever they come into contact with the

the plants as biennials, sow the seeds in September, and winter the young plants in a clean cold pit. By this means a good display of early flowers may be obtained. But good results may also be had by sowing in February and placing the pans or boxes over gentle bottom-heat. As soon as the seedlings are large enough to handle, they should be potted into 3-inch pots and grown in a pit with a temperature of 60° and quite near the roof glass.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Staking Sweet Peas.—In last week's excellent article on "Staking Sweet Peas," by S. M. Crow, he mentions the one fault of sagging in "Simplicitas" Patent Netting Circles. May we, as the inventors, be allowed to point out that we are this season eliminating this very small fault in an otherwise perfect support by the introduction of a centre wooden ring. We have also introduced an iron foot to prevent the centre stake from working loose in the soil.—THE BOUNDARY CHEMICAL COMPANY, LIMITED.

Earwigs Eating Buddleia Foliage.—I notice in THE GARDEN, page xvi., issue February 7, under "Miscellaneous," in the "Answers to Correspondents," a note to an enquiry about earwigs eating Buddleia, and you seem rather sceptical

were only too well aware of the irregular and sluggish behaviour of the bulbs. They had not responded to heat as they should have done, and in some cases the bulb was blind. It was pointed out by two large dealers that the season of 1913 was about two weeks earlier than that of 1912, whereas their Hyacinth bulbs were lifted at the date in both years. It is always unwise and risky to generalise on a too limited experience, and this is what, I fear, has been done. A longer acquaintance with the practice will either "kill or cure" it. Meanwhile we must go "steady," until this experimental stage has been passed. I would also like to say that I am by no means sure that I was right in what I said about bottom-heat. I find that there are advocates both for giving and withholding it, but that the majority favour it if it is not too strong.—JOSEPH JACOB.

Two Useful Midwinter-Flowering Plants.—After the Chrysanthemum season is passed there is often a slump in plants suitable for the decora-

till there is danger of frost. The second plant is *Eupatorium vernale*, which many readers of THE GARDEN will be well acquainted with. The requirements of these two plants are practically identical, except that the latter, being of dwarfer habit, may be accommodated in a cold frame till the end of the year.—E. HARRIS, Lockinge.

Is the Sea Buckthorn Poisonous?—Referring to the observations on wild birds and the Sea Buckthorn under "Notes of the Week," issue January 10, can it be that the berries of this native shrub are poisonous, and is this the reason why, in some parts of the country at least, the berries remain untouched by birds even in a hard winter? So far as the alleged poisonous properties of the berries are concerned, there is an amusing reference which I have seen quoted from Rousseau's "Réveries VII. Promenade." After eating a quantity of berries, which he found "very pleasant," he was warned that they were poisonous. "Nevertheless," he says, "I felt as I feel now, that every natural production that is pleasant to the taste cannot be harmful unless perhaps through excess. I confess, however, that I kept a watch on myself for the rest of the day, but, beyond a certain uneasiness, I felt no ill-effects. I supped very well, slept better, and rose in the morning in perfect health, having swallowed the evening before some fifteen or twenty of the berries of this terrible Hippophaë, a small quantity of which is poisonous, as they told me at Grenoble the next day." To the present writer the berries are unpleasant, but, is it really true "that every natural production that is pleasant to the taste cannot be harmful unless perhaps through excess?"—C. Q.

Saxifraga burseriana.—While the bruit of mortal conflict between Mr. Reginald Farrer and Mr. Clarence Elliott respecting the habitat of *S. burseriana* is still ringing in our ears, I think a few remarks concerning this dainty and early flowering alpine may be apposite. Whatever may be the behaviour of *S. burseriana* in shade, I think a glance at some plants of it which I have growing upon a moraine should convince the most sceptical that, subject to what I say about water supply, a position in full sunlight conduces towards a plentiful display of blossom. On each of three clumps not exceeding 3 inches in diameter I counted early in February upwards of thirty flower-spikes. The moraine in question is described by me in a chapter upon rock gardens which will be found at the end of "Gardens for Small Country Houses," by Miss Gertrude Jekyll and Mr. Lawrence Weaver. To one who knows how apt all Saxifrages are to "burn" in fierce sunlight, it goes without saying that a plentiful supply of water is necessary for *S. burseriana* during the summer. In the case of my moraine, this supply is provided by means of a perforated pipe. The initial expense of such an installation is soon paid for by the saving in labour of hand watering thus effected, and also by the decreased wastage of plants which might otherwise perish through drought. As the result of the accidental inclusion of one clump of the *Saxifraga* beneath a sheet of glass provided to meet the wants of the damp-hating *Androsace sarmentosa*, I am able to say that the effect of covering this Saxifrage with glass during the winter months upon its flowering are very slight indeed. Glass for protecting the opened flowers is another matter. I confirm all that has been said as to the desirability of heaping up dry chips of rock round the necks of moraine plants during the winter.—RAYMOND E. NEGUS, Walton-on-Thames.



A FRUITING SPRAY OF THE SEA BUCKTHORN.

about it. I have a plant of *B. variabilis* on my house which is quite spoilt by earwigs every summer, some of the leaves being eaten or torn to tatters and hanging by shreds. The young flower-spikes also have the ends eaten off. I have not the smallest doubt about earwigs being the culprits; they seem quite mad after the Buddleia. Two other trees of *B. variabilis* in the garden in the open are not much attacked. I trap the earwigs in the usual way in brown paper, and have also had to spray the trees with arsenate of lead, which, I presume, settles the pests, though I have not had the satisfaction of seeing the corpses.—C. G. O. B., Farnham.

Prepared Hyacinths.—With reference to an article from my pen which appeared in THE GARDEN for August 9, 1913, on "Prepared Hyacinths," I am sorry to say that they have not been the success this season that previous experience led me to anticipate. When I was lately in Holland, I found that the Dutchmen

tion of the cool greenhouse or conservatory. It is not everyone who has the means and convenience to fill their greenhouse or conservatory at this time of the year with expensive forcing plants and bulbs. Neither is it desirable to do so when plants less expensive, but none the less beautiful and useful, can be grown. The two plants which are the subject of this note are easily grown, and require nothing more than shelter from frost from the time the cuttings are rooted. The first is *Salvia Heeri*, which flowers during the greater part of January and February. The flowers are brilliant scarlet, borne on long, slender spikes or branches. They are most useful for cutting for indoor decoration, as they last for a considerable time in water. Like most other members of this race, they may be readily increased by cuttings inserted in sandy soil in the spring and placed under a hand-light. When established in pots, they should be grown in an exposed situation out of doors, and kept there

PEAT MOSS MANURE: IS IT INJURIOUS?

SEVERAL enquiries have reached us recently as to the advisability of using peat moss litter manure in the garden. There is no doubt that in some instances, where it has been dug into the soil fresh from the stables, it has proved injurious to plant-life, though as a top-dressing it has proved excellent. Owing to the increasing difficulties in obtaining straw manure, this question is one of vital importance. We therefore invited the opinions of a number of scientific and practical men in various parts of the United Kingdom. Herewith we publish a selection of these, and it will be seen that there is some difference of opinion on the subject.

GIVEN the choice between manure made from peat moss or straw, I should use the latter. It gives the best results in the long run. The peat moss manure, though, is distinctly valuable, especially on light soils, which dry out quickly. Once it is thoroughly moist, it retains its water supply in a fashion all its own, and the plant roots can get at it even when the surrounding soil is dried out. I have never seen it acting injuriously, but it is only right to say I have only seen it used on the extensive scale for the culture of vegetables.

Cambridge. R. H. BIFFEN.

I FEAR I cannot give you any very definite information about peat moss litter as manure. I know that when kept for some months, and when turned a couple of times, it is an excellent surfacing for Primulas, Wallflowers, &c. I tried it here one year with some vegetables, and with some Primula seedlings as a manure, and in both cases the result was not satisfactory, and the men have a great prejudice against it as a manure. It makes no difference to them in any way; hence they have no interest in the matter, and as it is easier for them to work than cow-manure, I came to the conclusion that there must be some grounds for their dislike of it. I was not at all satisfied that it was in fault as regards the seedling Primroses; but the man in charge of them, an experienced man, still strongly maintains that it was the manure. Personally, I prefer cow-manure if I can get it, or even well-decayed stable litter. We found that for small stuff and for ground where bulbs were that the most useful and safe manure was old hot-bed material, used the following spring; that is to say, hot-beds which were made up in January, 1913, are now being used as manure. This is very well decayed and crumbles down easily.

F. W. MOORE.
Royal Botanic Gardens, Glasnevin.

PERSONALLY, I would prefer peat moss litter manure to straw manure. The original acidity of the peat absorbs a high percentage of ammonia, and is, therefore (all other factors being the same), of higher available nitrogen value than straw manure. In addition, it has a distinct value from a physical point of view; it raises the water-holding power of the soil. I know of a garden close to this city where peat moss litter manure is used entirely, and the gardener believes absolutely in it as a good crop producer. I have in my own gardening found it excellent for herbaceous borders.

D. HOUSTON.
Royal College of Science for Ireland, Dublin.

YOUR letter of February 7 has been referred to me for reply. Experiments at this College have shown the absorptive power of good peat moss litter to be about three times as great as that of straw, but different samples vary considerably in their power of absorbing liquids. At the Armstrong College, Newcastle, for example, it was found that one sample absorbed eleven times its own weight of water, while another sample took up only nine times its own weight. Chemically, peat moss contains more nitrogen than straw, but considerably less potash and a little less phosphoric acid. Average analyses made at this College are as follow:

	Peat Moss.	Straw.
	Per cent.	Per cent.
Nitrogen ..	0.8	0.5
Phosphoric acid ..	0.1	0.3
Potash ..	0.2	1.5

The nitrogen in peat moss, though greater in quantity, is probably less available to the plant than that in straw, so that peat moss in itself may be considered to be of less manurial value than straw. But, owing to its greater absorptive power, the manure made from peat moss litter is richer than manure made from straw, as the following analyses made by Dr. Dyer (see "Standard Cyclopædia of Modern Agriculture") show:

	Stable Manure made with Straw.	Stable Manure made with Peat Moss.
	Average of 3 samples.	Average of 2 samples.
	Per cent.	Per cent.
Water ..	70.03	77.84
Organic matter	24.28	18.02
Phosphoric acid	0.48	0.37
Lime ..	0.70	0.33
Potash ..	0.59	1.02
Magnesia, &c.	1.30	1.08
Siliceous matter	2.62	1.34
	100.00	100.00
Total nitrogen	0.62	0.88

It will be noticed that the peat moss manure contains a good deal more potash than the straw manure, although the peat moss itself was deficient in potash. The difference is due, of course, to the potash absorbed from the excrement of the animals. Peat moss manure contains more nitrogen than straw manure, and more potash, but a little less phosphoric acid and less lime. The physical effect of peat moss manure in the soil is, of course, rather different to that of straw manure, because the manure is always "short." We have used both here, but have not noted anything harmful about the peat moss. I am writing to a farmer who has had considerable experience with it, and will let you know what he says in due course.

G. H. GARRAD.
South-Eastern Agricultural College, Wye, Kent.

IN reply to yours *re* peat moss litter, we do not use it here as a manure, as we have not found that which we have had from London satisfactory.

F. R. WILKINSON (Principal).
The Horticultural College, Swanley, Kent.

PEAT moss litter is best dug into the ground, as if left on the surface the pieces of peat are somewhat of a nuisance, as they do not decay readily. This manure, however, adds to the acidity of the soil and thus has a slightly deterrent effect on the growth of vegetation, and its value is more due to the fact that it soaks up liquid manure, and thus saves fertility that would run to waste, rather than to its own manurial value.

The fibre is, of course, good for "opening up" a stiff soil, but, ton for ton, good stable manure is superior.

P. McCONNELL.

MY experience with peat moss litter manure is neither very extensive nor very recent; still, I have used it in the kitchen garden here, and both as a mechanical agent on our heavy soil and as a manure the results were quite satisfactory. I have also used it with good results in Rhododendron culture. Since receiving your letter I have interviewed two of our best and most extensive farmers whom I knew used it largely. One of them always mixes it with straw manure from the local dairies, with excellent results with all kinds of farm crops. The other uses it alone, although he also uses some straw manure; but he says if he could get sufficient peat moss litter for his 400 acres, he would use nothing else. Both of these farmers pay about £3 10s. per acre, and they grow Potatoes extensively. I have had the opportunity of observing the operations of a market-gardener within the municipal boundaries of Edinburgh for over thirty years. This man grows vegetables exclusively, and uses no other organic manure than peat moss litter. He grows excellent crops of all kinds of vegetables, as he would require to do, for he pays £10 per acre for his land and has to pay the City rates.

CHARLES COMFORT.
Broomfield Gardens, Davidson's Mains, Midlothian.

I HAVE seen peat moss litter manure used largely, with very good results; in fact, I know a farmer who uses this in preference to any other manure for such crops as Potatoes, Swedes, Mangel Wurzel, &c., on heavy land. For my own part I would give preference to straw manure.

Royal Gardens, Windsor. JOHN DUNN.

I HAVE used peat moss litter manure from stables, where the horses are regularly hard fed, for several years in fairly large quantities, but mostly for top-dressing herbaceous and Rose borders, Begonias and, indeed, almost all summer-bedding plants, also for all sorts of fruit trees and bushes, and I think it one of the best manures for this purpose. I never now dig it in; the residue is usually raked off and burnt along with other garden rubbish. For kitchen garden purposes I think it inferior to straw manure, as on one occasion a very large proportion of my Potato crop rotted after an application of it dug in in the usual manner, and this, too, in a season when Potatoes did remarkably well under other conditions. I may add, however, that I used it for two years in succession on the flower garden beds, digging it in, without any bad results; but, as I have not continued to use it thus, I am not in a position to say how long it would take to prove detrimental to the occupants of the flower-beds.

THOMAS WILSON.
The Gardens, Glamis Castle, Glamis, Forfarshire.

- FORTHCOMING EVENTS.
- February 24.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. on "The Uses of Explosives and of the Blow Lamp."
- February 26.—Manchester and North of England Orchid Society's Meeting. Royal Botanic Society's Meeting.
- February 27.—Finchley Chrysanthemum Society's Annual Meeting. Beckenham Horticultural Society's Meeting.

BOWLING GREENS.

THE game of bowls, the national game of Scotland, has made rapid strides in popular favour all over England during the last ten or fifteen years. There is ample evidence of this in our public parks and pleasure grounds, all the most enterprising of our municipal corporations providing greens, the number of which are

will materially assist in laying the turves level. To secure uniformity in the thickness of the turves, they must all be passed through a mould or shallow box. This is 1 inch, 1½ inches or 2 inches deep, according to the nature of the soil, and 1 foot square or 15 inches by 1 foot. Each turf is turned grass downwards in the box, beaten down to make it flat, and whatever soil and roots remain above the level of the mould is cut off with an old scythe blade, as shown in the illustration. By this means every turf is exactly the same size and thickness, and there are no broken corners. The turves must not be laid straight across the green, but from corner to corner, the join of two turves being in the middle of the one next to it, as the bricklayer lays his bricks. If this is not done, there may be ridges all down the green, formed where the turves join in rows.



A BOWLING GREEN IN THE MAKING. THE WORK MUST BE FREQUENTLY TESTED WITH STRAIGHT-EDGE AND SPIRIT-LEVEL.

being added to every year. It is also interesting to record that so popular is the game, the initial cost of construction is soon recovered by a small charge to the players. The charge made by one prominent corporation is one penny per half-hour for each player, this fee showing an average return of £40 per year for each bowling green maintained by that body. The first consideration is the selection of a site suitable for a bowling green. The position must be an open one, so that every portion of the playing pitch gets the maximum amount of air and sunshine. A full-size bowling green is 42 yards square. The piece of ground selected should not be much under 50 yards square, and fairly level. Greens half this width are sometimes made, when there are only a few players to cater for; but if the green is square, it permits of the play changing from the ends to the sides in alternate days or weeks, so that the ground is not worn in one direction. For the game of bowls it is more important than in any other sport played on grass to have a level surface. A perfect green should be as level as a billiard-table. Having understood this, it will be readily recognised how important every detail in the making of a green must be studied.

The initial outlay will depend largely on the nature of the subsoil. One that is very porous need not have any brick rubble put in for drainage, the layer of ashes being sufficient. The making of bowling greens on heavy clay soils entails much more work. The ground must be excavated to a depth of 15 inches; if waterlogged, pipes must be put in for drainage. Fill in to a depth of 6 inches all over the position of the green with brick rubble and clinkers. With rammers make this as firm as possible. Next spread 3 inches of fine ashes all over, placing on this 3 inches of good soil; this also must be made very firm, otherwise in a year or two it will sink and spoil the even surface of the turf. A thin layer of fine sand should be spread over the surface, which

the best month for sowing. Firms who specialise in grass seeds—Messrs. Carter, Raynes Park, and Messrs. Sutton, Reading, for instance—supply a special mixture for bowling greens, or a mixture may be made up of two parts of Crested Dog's-tail Grass (*Cynosurus cristatus*) and one part fine-leaved Sheep's Fescue Grass (*Festuca ovina tenuifolia*). The preparation of the green for seed-sowing is the same as for the turf, except that instead of the turf, 2 inches of fine mould should be spread over the surface.

At all stages in the making of bowling greens special and frequent attention must be paid to the levels, testing the work as it proceeds with a straight-edge and spirit-level. It is usual to have a ditch a foot wide all round a bowling green, with batten trellis-work in the bottom to catch the bowls when they roll off the green. Another familiar object beyond this on many greens is a raised bank 1 foot or 15 inches high sloping from the green. As an edging to the green, boards about an inch thick and 6 inches to 9 inches wide are placed in the ditch, sufficiently low for the thickness of the turf to rest on the top edge of the boards.

In a short article such as this it is only possible to touch on the main points in the making of a bowling green. Too much importance can hardly be attached to the use of the very best turf, and where this is prohibitive in price seed sowing must be resorted to. Constructed in such widely different localities and under varying conditions, these have much to do with the exact methods adopted by the green-makers.

ROSES ON WALLS AND FENCES.

WHEN quite bare, most of our walls and fences are somewhat unsightly. It also seems a waste to let such valuable space remain unoccupied. Few, if any, subjects could possibly furnish such walls with so pleasing a beauty as well-selected and judiciously placed Roses. I write the last three words with a real meaning; for how often do we find Roses placed to the very best advantage? In almost all cases the lower portions of our walls and fences are bare after the first year or two. Both this bareness and the lesser show of bloom that comes after the first early glut of flowers from the long growths of the previous season can be minimised by placing some of our free growers and bloomers between the taller-habited varieties.

For example, no Roses will do better upon a wall than Marie van Houtte, Catherine Mermet, Lady Roberts, Molly Sharman Crawford, Lady Ashtown, the white and pink Maman Cochet, Bridesmaid, and, in fact, numbers of our most beautiful Teas and their numerous hybrids, the mere names of which would occupy far too much space. Oftentimes, too, these free growers will cover a wall up to 10 feet and 15 feet. But my main object now is to point out their extreme usefulness, both as an aid to the better furnishing of the wall and to keep up a more continuous crop of blooms.

Last year I noticed some good examples of this combination of climbers and our extra free dwarfers growers. In one case the climbers had gone quite 25 feet or 30 feet up the front of a house raised upon a terrace. The sorts most used were L'Idéal (extra good for this), Rêve d'Or, Climbing Perle des Jardins, Reine Marie Henriette, Ards Rover, Lamarque, and that always useful Noisette, Mme. Alfred Carrière. Most of the dwarfers already named were planted at the foot and midway between the climbers. A few flowers were still in evidence upon the latter, while the lower plants were simply a mass of bloom. There is yet another advantage in these last, for they will throw many very useful late flowers after those in the open are past, the protection of the wall being just what is needed to develop the latest buds. There is little good in naming more varieties, but I would call attention to the need for more generous feeding



LIFTING THE TURVES. THESE MUST ALL BE UNIFORM IN SIZE AND OF THE FINEST QUALITY.



THE TURVES ARE PLACED GRASS DOWNWARDS IN A MOULD AND THE SOIL CUT OFF WITH AN OLD SCYTHE BLADE.

than our well-established wall Roses often receive. Because they have grown well, it does not mean they are in no want of this attention; rather the reverse. Oftentimes they are in a very narrow border, with a hard and uncultivated roadway or path at their foot. It is really astonishing to see how well many of our vigorous climbing subjects do in such positions. Wistarias, Magnolias, &c., as well as our Roses, thrive as well as could be expected if they have ample root-run and cultivation. We can help them a great deal by the extra free use of liquid manures, and should not be applied now, but in the summer and autumn.

When contemplating the planting of such strong growers, every advantage should be seized of making the surrounding soil as congenial and rich as possible; for we can so seldom get the opportunity again. The plants are generally put in as a permanency, and the walls themselves draw much moisture from the soil.

A. P.

HARDY CHINESE PRIMULAS.

THE Primulas from China are becoming of great importance to horticulture, and, numerous as they are already, it is certain that their numbers will be greatly increased, not only by new finds, but also by the hybrids which are being raised. It is indeed surprising to realise how rapid has been the influx of these Chinese Primulas.

Professor Bayley Balfour, in his paper at the Primula Conference of the Royal Horticultural Society in 1913, summarised the progress in a lucid manner. From his notes we gather that Lehmann's monograph of the family, published in 1817, did not include a single Chinese species. Twenty-seven years later, Duby, in De Candolle's "Prodromus," admitted only one Chinese species—the well-known greenhouse plant *P. sinensis*. Pax, forty-four years later, gave only thirty-seven Chinese species out of a total number in his monograph of the genus of upwards of 144. In 1905 the same authority described eighty-eight Chinese Primulas in Engler's "Pflanzenreich." At the last Primula Conference upwards of 140 Chinese species were recognised. Professor Bayley Balfour's classification is followed in these notes.

A considerable proportion of these Chinese Primulas are tender, or only half-hardy, in culti-

vation in this country, and I propose to deal at present with those which have proved fairly hardy. These alone form a valuable and numerous class, destined to occupy a prominent place in the gardens of the future. Taking them in alphabetical order, we first come to

P. angustidens (Franchet).—This is synonymous with *P. Wilsonii* (Dunn), and was introduced by Messrs. James Veitch and Sons of Chelsea under the name of *P. Wilsonii*. It was discovered by their collector, Mr. Wilson, in the Tali district of Yunnan, and has been in cultivation since its introduction in 1905. It has frequently been

sent out by nurserymen as *P. vittata*. It is closely related to *P. Poissonii*, and, like that species, belongs to the section Candelabra. *P. angustidens* is, however, a much better plant than *P. Poissonii*, as it is not only hardier, but is a better bloomer, although the flowers are smaller. In many places where *P. Poissonii* will not stand the winter, *P. angustidens* has proved entirely satisfactory. It is a strong grower, and under favourable conditions will reach a height of fully 2 feet, and will bear a number of lilac-purple flowers. The foliage is bright green and glossy. It is naturally a lover of moisture, but is not difficult to accommodate in a border or bog, among the moist grass, or in the lower parts of the rock garden. Its strong scent is a point in its favour, while the fact that it seeds freely will soon make it plentiful in cultivation. Cultivation: Good rich soil; damp situation; half shade.

P. Beesiana (G. Forrest).—This species, raised by Messrs. Bees from seeds sent by their collector, Mr. George Forrest, in 1908, appears to have been distributed about 1911. It also belongs to the Candelabra section, in which six purple-flowered species were recognised by Professor Bayley Balfour in his paper. It comes from the Tali region of Yunnan, and is a native of the moist meadows. It is a vigorous species, but is not so reliable in cultivation as its ally *P. Bulleyana*. It is said to reach as much as 3 feet in height when in congenial circumstances, but it is rarely seen of this stature. It bears whorls of velvety purple flowers, brightened by a yellow eye, which rise on a sturdy scape from amid the Primrose-like leaves. Some do not care for its colour, but it is likely to be of considerable value to hybridisers. Cultivation: Pure pulverised loam to which has been added some leaf-soil; half shade is best, but it does well also in full sun if soil is moist.

P. Bulleyana (G. Forrest).—Another of the valuable Primulas we owe to Mr. George Forrest and the enterprise of Messrs. Bees, Limited, is *P. Bulleyana*, which has come rapidly to the front as one of the best of the newer hardy Chinese

Primulas. It is now so well known that little need be said regarding its appearance. It has certainly come to stay, and whether as a distinct species or as the parent of a series of hybrids is bound to exercise an important influence upon the gardens of the future. It has handsome Primrose-like leaves, from among which spring tall scapes of flowers in whorls, rising in graceful tiers one above another. It lasts for a long time in bloom, and the effect of the flowers is practically indescribable, as they pass through various hues from their first showing colour till they fade off. The colours shown may be said to embrace scarlet, buff, orange and apricot, the final tint being a good yellow. This is a very easy Primula to grow, and may be suited either in any ordinary moist soil or by the side of a stream or pond, or in a moist meadow. It is vigorous and hardy, and seeds freely in the garden. Cultivation: Same as *P. Beesiana*.

Hybrids of P. Beesiana and P. Bulleyana.—From seeds of *P. Beesiana* × *P. Bulleyana* a race of pretty Primulas has been secured, these being of a coppery red and of better growth than *P. Beesiana*.

P. capitata (G. Forrest).—Authorities appear to agree that the Himalayan *P. capitata* (Hook.) is represented in China by several forms. Of these, *P. sphærocephala*, Balfour fil., and *P. pseudo-capitata* have been introduced, but are as yet little known. They bear a considerable resemblance to *P. capitata* (Hook.), and are characterised by the possession of the same globular heads of purple-blue flowers. From a garden point of view these may be classed with *P. capitata*, which is not generally a long-liver. They grow naturally in gritty soils and on grassy hillsides. *P. sphærocephala* comes from the Kari Pass in Yunnan, and *P. pseudo-capitata*, which was collected by Kingdon Ward for Messrs. Bees, Limited, and introduced in 1911, comes from Atuntsu in the same province. Cultivation: Good loamy soil in a shady position.

P. Clementinæ (G. Forrest).—This is a small plant which was introduced by Messrs. Bees, Limited, in 1908. It is more or less covered with farina, and the slender scape, considerably longer than the leaves, carries several lilac flowers at its summit. Cultivation: Loamy soil with the addition of a little coarse sand; half shade.

Morelands, Duns.

JOHN MACWATT.

(To be continued.)



LAYING THE TURVES WITH THE AID OF THE TURF-BEATER.

DAFFODIL NOTES.

Irregularity of Pot-grown Bulbs.—There is general chorus of complaint about the irregularity with which pot-grown stuff is flowering. In some way or another the season of 1913 affected the ripening of the bulbs. When I was in Holland in the early days of this month I saw an example of it at a small market-grower's at Beverwijk, where a fine healthy batch of Emperors were displaying this undesirable behaviour, some of the plants being almost in flower, while others were but half grown. Irregularity is a serious thing for those who cater for the cut-flower trade, as it means a much less number of boxes can be passed through the houses in the course of a season. The amateur who grows Daffodils in pots is not concerned with the question of profit, but he is, naturally, not over-pleased when he finds that in a potful of five or six, two or three bulbs have almost done flowering when the others are only just commencing. This year, at any rate, it is not the dealer or grower who is in fault, but our old friend the Clerk of the Weather, who evidently was not thinking of the forcing season when he was regulating affairs in the spring and summer of 1913. Coming from the general to the particular, I am wondering how far this abnormal year has upset my theory of how to produce good blooms early in the year. By this I mean blooms fairly in "character." Twelve months ago my dodge "worked," but is only "so-so" in its results this present season. I am not the only one who is experimenting in this direction, for at Hillegom I saw the practical outcome of another "dodge" to promote good early growth. Here the difference between the ordinary and the other was most marked. Of these more anon.

Some Good Varieties for Early February.

— With accumulated experience, certain varieties are beginning to stand out as good for early work in pots. Foremost among these I must place Fairy, a very free-flowering yellow belonging to Division I. Its prominent and distinguishing characteristic is the fine bold roll-back of its widely expanded trumpet. It is naturally a dwarf grower, but this is no detriment to its value as a garden plant—rather the reverse, as it affords variety in height in the bed and border, while under glass it is always sufficiently long for any practical purpose. A desideratum in these early days among Daffodils is variety. We have a good many yellows, but not many bicolors and very few red cups. Whites, if we may so describe Mrs. Langtry and Minnie Hume, are equally scarce. Fairy Queen, which one might call a clean-cut-out Mrs. Langtry, is altogether a most delightful and satisfactory flower; it "comes" easily and freely, and when fully developed is one of the Leedsis to which the adjective "petite" might

truthfully be applied. It is one of the whites of the future, or I am greatly mistaken.

In Silver Spur we have a fine large bicolor trumpet. Considering its price (about 2s. 6d. per dozen), I wonder it is not more known, for it supplies a want, inasmuch as it provides a contrast in form to the stiff and well-known Victoria. It has a large flower, quite as big as a Duke of Bedford, with a very refined-looking deep yellow trumpet and not at all a bad perianth. Only it is so very inapplicable to readers of THE GARDEN. I would have said it must have heard the old proverb about casting pearls before swine; it is so sparing with its blooms. It is not stingy like some, nor prodigal like others. One big bulb, one good flower, is its rule, and one which is seldom broken.



THE STATELY GALTONIA CANDICANS GROUPED IN THE BORDER FOR EFFECT IN LATE SUMMER.

Under bicolors I must just mention the cheap and pretty Queen Bess as an excellent incomparabilis (Division 2B) for pots or for growing *in extenso* for cutting. When we come to red cups, I am year by year getting more confirmed in the very high opinion I have formed with respect to the good qualities of Blackwell. My own two pots this year "were a treat," and would have done me credit at Birmingham. Alas! alas! the same money that can buy twelve fine bulbs of Golden Spur will only purchase one of Blackwell.

I am glad to find that early culture under glass is more and more occupying the attention of traders. The Royal Horticultural Society's

Forced Bulb Show in March seems to have reminded people of the potentialities of the Narcissus family as pot plants. Gradually the best are crystallising out, and doubtless more than two or three are experimenting as to the best means of producing good early flowers. The collection that I have already referred to at Hillegom belonged to the celebrated firm of Messrs. R. van der Schoot and Sons. In all there were forty-five varieties, most of them represented by two or three panfuls. The majority were their own Poetaz and trumpet varieties. Among the former, Sunset and Triumph were particularly good. As I saw Sunset it was a more effective flower than Jaune à Merveille, inasmuch as its cup is a deep orange, which is well set off by the pale yellow perianth. Fairy was splendid. Hoboken, which is a sort of small, rather deeper-coloured Golden Spur, very early and very free; and the sweet-scented Vanilla, with its wide-mouthed trumpet and somewhat spidery perianth, were both good, and are well worth growing under glass. Does not all this suggest a Daffodil house? What pleasure such a structure might afford us all through February and March! Then, when the Daffodils are over, it would just do for a collection of Darwin Tulips.

JOSEPH JACOB.

THE CAPE HYACINTH.

(GALTONIA CANDICANS.)

THIS noble border plant is now so often seen that it is cherished with the same feelings of respect extended to those flowers that have been grown for centuries in our gardens. To those who are not acquainted with the introduction of Galtonia candicans, it may come rather as a surprise to learn that it was introduced by one who died in the spring of last year. The introducer was Mr. Thomas Cooper, who spent much time collecting plants in South Africa. Another well-known plant for which we are indebted to him is Asparagus plumosus.

G. candicans is sometimes known under the generic name Hyacinthus, or by the popular name Cape Hyacinth. It is a bulbous plant belonging to the Lily Order, with fragrant, white flowers

from July till late September. The drooping flowers are borne on tall spikes 4 feet to 6 feet in height. It is well suited for planting in masses in the flower border, or for mixing with peat-loving shrubs which are not tall enough to hide the handsome spikes of bloom. Although it is a hardy subject, it is occasionally grown for the conservatory, where it is appreciated, as it makes an admirable pot plant. It is of easy culture, showing preference for a rich, leafy soil to which a fair amount of peat has been added. It may be grown from seeds, but this is tedious, as the seedlings take four or five years to flower. The more satisfactory way is to increase it by offsets from the bulbs.

THE LENTEN ROSES.

By reason of their purity of blossom and winter flowering the Christmas Roses stand alone in their season, those of the Lenten section are equally without a rival for quaint beauty and distinctive colouring at any time, and as such merit the attention of those who garden chiefly in the open air. It so happens, however, despite their many graces, their abundant flowering and simple cultural requirements, that these Lenten flowers, while prized by some, have never been greatly popular. Rather has it been left to the few who specialise in good things to take them upon their merits and make of them the success they deserve to be. Were the term "retiring" or "reserved" possible of application to a flower, then I would certainly say that these Lenten Roses merited some such a phrase, seeing that theirs is a beauty apart—something to be looked for—and not making for ostentatious display. Hence for those who see beauty only in gaudy flowers, these are not well suited. All the same, it is not too much to urge that, even without flowers, in certain localities and soils they would merit cultivation for their leafage alone. Lovers of shelter and appreciating the proximity of evergreens or shrubs to protect them from the biting winds of spring, this and a great depth of cool and, if possible, moist loam would appear to be among their chief needs. Shelter, indeed, if we would retain the winter beauty of their leafage till the arrival of the new, would appear more or less a necessity, though even this is modified by circumstances, particularly those of soil and soil moisture. Given the shelter of Hazel bushes, these plants, too, are very charming in the woodland, the same kind of shelter standing them in good stead when growing in lighter loams over chalk. Indeed, there would appear to be much in chalky loams to satisfy their needs, the cooling influences of stone and soil depth apparently suiting them as much as the lime, which they seemingly assimilate to their advantage. But they are not fastidious, and one may see them occasionally in perfection in the strongest of loamy soils. One item, however, is important, viz., that a considerable soil depth be assured, and certainly not less than 2 feet. In this connection mention should be made of their remarkable root activity, which, with its abundance, quite accounts for their somewhat voracious appetite. To some extent the great root system of these Lenten Roses finds its parallel in the fine leafy bushes above the ground, which could not receive adequate support otherwise. Hence it should be clear that soil of a generous character and depth would be much to their liking, and if to this be added light shelter, then, I think, we have presented in nutshell form their chief cultural requirements.

To those seeking to increase them by division—an operation that may be performed in autumn or spring—I would suggest the former as the best season, to save conflict with the flowering period and to enable the plants to become partially established before the coming of the new leaves. Lenten Roses are among those herbaceous perennials which I refer to as "perpetual rooting"; hence they may be planted or transplanted over a somewhat extended period of time. The Christmas Roses, on the other hand, are distinctly periodical in root production; hence, for these, if we would have of their best, I have unhesitatingly set apart August and September as *the only rational planting season of the year*. The genus *Helleborus* is the only one I recall at the moment where these differences of root production are so obvious, which to the observant gardener should give food for much thought.

THE RED-FLOWERED PLUMBAGO.

In most private gardens this beautiful plant, *Plumbago rosea*, is usually grown in pots, and certainly it is a most useful subject for dotting about among Palms and Ferns in a large stove; but, I think, to get the best results it should be planted in a bed or border. Evidently this plant enjoys a fairly free root-run, for it produces much stronger foliage and flower-spikes when planted in a narrow border and trained up the back wall of a warm house.

Here the wall of the stove is completely covered with it, and such has been the quantity of flower-spikes produced that we have been able to decorate several large dinner-tables with it this winter, and there are still a large number of spikes just opening their flowers. The plants are growing in a narrow border about fifteen inches wide



FLOWERS OF THE LENTEN ROSE, *HELLEBORUS ORIENTALIS*, A PLANT FOR THE SHADY BORDER.

A primary attribute of not a few Lenten Roses is the profuse spotted character of the flowers, some of which are very beautiful, while others, of rich or deep plum or purple colouring, appeal to a large number. Unfortunately—or otherwise—the flowers are not of great service in the cut state unless the stems are split longitudinally, and, even so, they never appear quite happy; hence their best place is the garden where they associate well with plant and shrub in woodland and other places. Some good varieties are *antiquorum* James Atkins, rose pink; *a. Willie Barr*, also rose coloured; *orientalis* (see illustration); *colchicus* and *c. magnificus*, plum and crimson coloured respectively; *Apotheker Bogren*, crimson-purple; *gutta tus*, white, spotted crimson; and *g. sub-punctatus*. These Lenten Roses are free seeders, and readily submit to cross-breeding.

E. H. HENRI

and the same in depth, in fibrous loam, with the addition of a 6-inch potful of bone-meal to each barrow-load of loam. Beyond heavy syringing during the summer months and an occasional pinching of the growths to ensure an even distribution of the flowers, the plants have received no special attention. It is necessary to pinch the growths at least three times, for, if left to grow as they like, all the flowers will be at the top, which detracts from the appearance of the plant when grown on a wall. A sharp look-out must be kept for thrips, which play havoc with the foliage if allowed to get a hold. An occasional syringing with Niquas is a good preventive of this pest. After the plants have finished flowering they are cut down to within a foot of the ground, the border top-dressed and kept lightly drier till growth commences in the spring.

Perhaps it will interest some of your readers who have dinner-tables to decorate to know that a table much admired here was done with *Plumbago rosea* mixed with sprays of *Deutzia gracilis*. This makes a very graceful combination, and it lights up well.

JAMES G. BESANT.

Oak Park Gardens, Carlow, Ireland.

VIOLETS IN THE OPEN GARDEN.

ONE of the prominent flowers of the season is the popular Violet, and many gardeners go in for its culture somewhat extensively. Encouraged and protected by glass, in one form or another, Violets can be coaxed to do marvellously. They are, however, eager enough to flower in the open, and will do so under almost any conditions so long as the weather remains mild. Should hard weather be encountered, however, many growers

NEW AND RARE PLANTS.

Iris Cantab.—We believe this beautiful early bulbous variety, which, presumably, is of the *reticulata* set, was raised by Mr. A. E. Bowles, and it is certainly one of the most charming of its class. The fragrant flowers are singularly compact, and nearly six inches high as shown. The standards are pale blue, falls pale violet, with narrow golden crest. From Messrs. H. Chapman, Limited, Rye. Award of merit.

Rhododendron moupinense.—This new Chinese species was exhibited under the provisional name of *warleyense*, a little 6-inch-high bush, having three large white flowers of about two and a-half inches across, in which were seen deep chocolate-coloured anthers. The blossoms have a horizontal inclination. The Box-like leaves are obovate, entire, about one and a-half inches long, and nearly

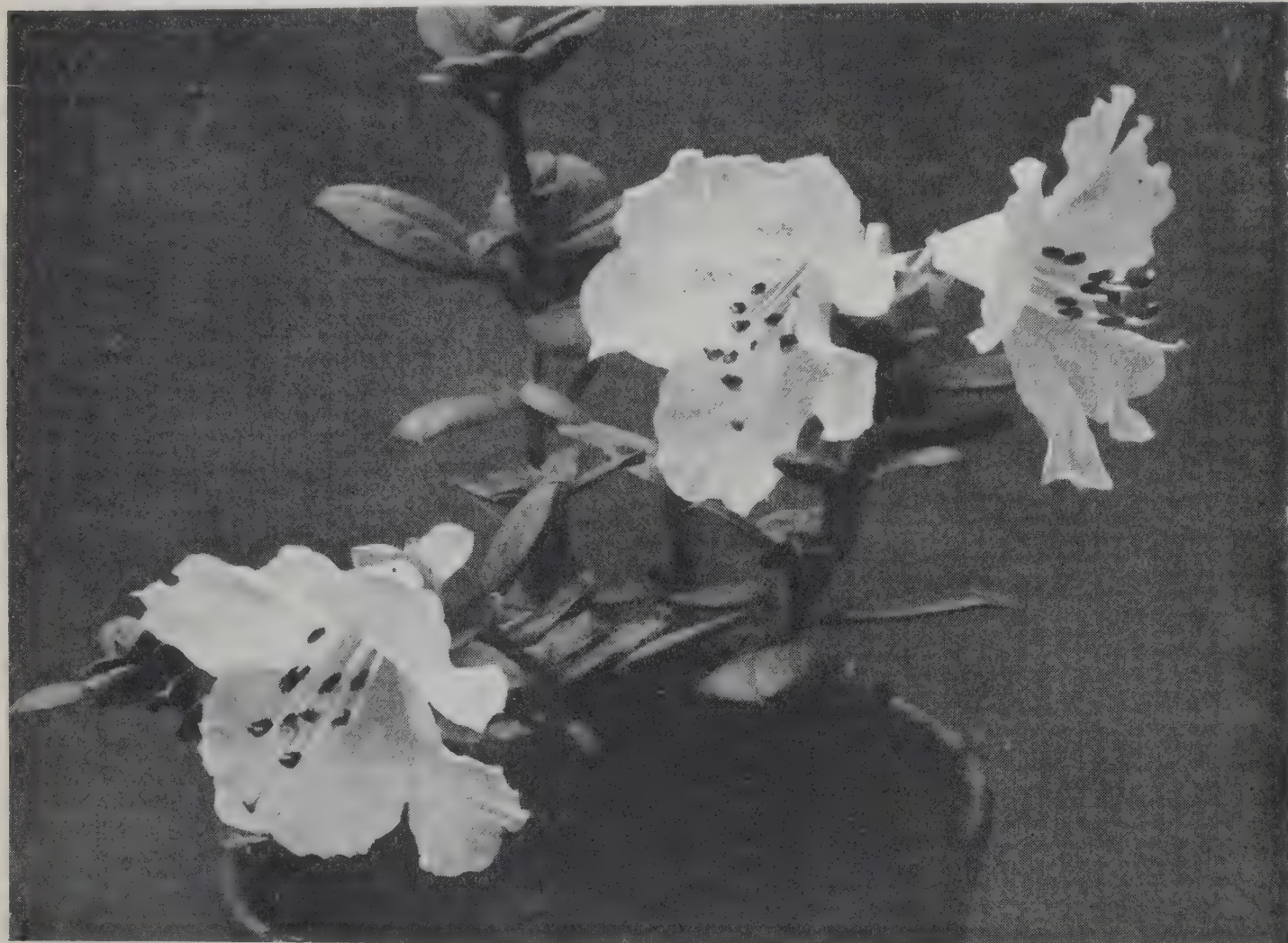
C. J. Phillips; *Odontioda Diana* variety *Glad*, from Messrs. J. and A. McBean; *Cymbidium Schlegelii* Southfield Variety, from Mr. W. Butler; and *Odontioda Lucilia*, a mauve and purple variety with dark blotches, from Messrs. Charlesworth and Co.

The foregoing plant novelties were shown before the Royal-Horticultural Society on the 10th inst.

SEASONABLE NOTES ON CARNATIONS.

BORDER Carnations are not yet quite extinguished by the immensely popular Perpetuals, and a very nice way of growing a selection is to place them in pots—7 inch for preference—in the South, standing them in the open till the flowering stage and housing them during that period. In the North it is better to grow them the whole time under glass. The plants do better and flower a few weeks earlier than those growing in the open. *Lady Hermione*, can be kept in health only by pot culture, and, as a rule, the lovely flakes, bizarres and white and yellow ground Picotees are easiest to preserve in robust health when grown in pots, but, of course, without being coddled. A compost suited to soft-wooded plants generally suits border Carnations equally well, the one thing they and all sections of Carnation abhor being deep potting.

For Outdoor Cultivation.—I need not labour to prove the extreme hardiness of the Carnation, and only remark that this physical quality permits of those which have been wintered in pots to be planted in beds and borders in early spring as soon as the soil is in a fit condition to work. Those planted early in the year are invariably superior when in flower to those kept on till March or April. If it is not possible or convenient to plant now, the plants should have manure to keep them from becoming more or less starved. Plants rooted from cuttings late in autumn are not to be despised, such a free-flowering variety as *Raby*



RHODODENDRON MOUPINENSE, A NEW DWARF HARDY CHINESE SPECIES WITH WHITE FLOWERS.

leave the beds to look after themselves; whereas, if given a little care while such weather lasts, which is generally only for a few days, the roots would more than repay for the trouble in the extra flowers they would then produce. Violet-beds should always be so situated as to be somewhat protected from the keen winds, and, of course, replanting should be done frequently enough to ensure the crowns being always full of vigour. From the start of blooming to the finish in the early spring it pays to give outdoor Violets a light dressing of Peruvian Guano from time to time. If the weather is mild, the guano may be applied once a month; but if there is much hard weather, once in six weeks will be sufficient. During hard frost give the plants protection, by night at any rate, placing a light frame of lath over them—to prevent crushing—and covering with mats or anything else that comes handy. By following these hints open-air Violets will give satisfaction.

J. T. B.

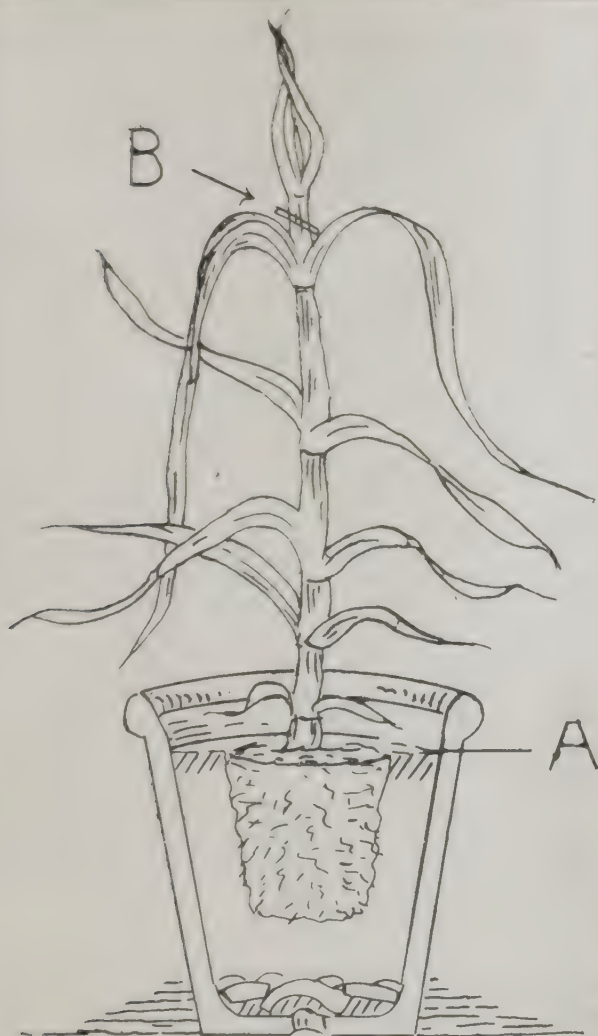
an inch broad. The exhibited example was said to be about five years old; hence might be of the greatest value in the rock garden. The species is said to be quite hardy. From Miss Willmott, Warley Place, Essex. Award of merit.

NEW ORCHIDS.

The number of Orchids to gain distinction was even greater than usual. Sir Jeremiah Colman, Bart., gained a first-class certificate with *Dendrobium Lady Colman*, a magnificent hybrid of purple and velvety maroon colour. Baron Schröder gained a first-class certificate for *Cypripedium Pyramus* and an award of merit for *Cattleya Trianae* Mr. de B. Crawshay. Awards of merit were granted to the following: *Cymbidium gottianum* Westonbirt Variety and *Odontioda Margaret* Westonbirt Variety, both from Lieutenant-Colonel Sir George Holford, K.C.V.O.; *Cattleya Trianae* Mrs. Phillips, shown by Mr.

Castle, propagated in that way, giving abundance of bloom till quite late in the year, and for that reason stock from cuttings is more desirable for use in mixed flower borders than that from layers. Autumn-planted layers will now appreciate a dressing of soot, which, besides acting as a slow stimulant, keeps birds from pecking the leaves.

Malmaisons.—Plants which have been wintered in 3-inch or 4-inch pots are ready to transfer into others 6 inches or 7 inches in diameter. I now grow very few plants, but at one time I preferred to pot them on in autumn into 6-inch pots, and the strongest of these, being shifted at this season into 8-inch and 9-inch pots, were induced to grow on continuously till the next autumn, when a crop of bloom was secured off the side shoots. Old plants not to be given a shift must have manurial aid and, as occasion permits, be restaked, weakly shoots cut away, and leaves that have recently perished removed.



REPOTTING A YOUNG PERPETUAL-FLOWERING CARNATION: A, DEPTH TO REPOT; B, WHERE TO PINCH OUT THE YOUNG GROWTH.

Perpetuals.—Young plants recently placed in 2½-inch pots fill the latter with roots in the space of a few days, and must then be transferred to larger ones—either 3-inch or 4-inch—a check from underpotting at this stage being inimical to the whole future of the plants. The Perpetuals succeed in such a variety of soils that no one need hesitate to attempt their cultivation on account of soil, the chief point being to make it open enough by means of lime rubble and sand, if too close, to preserve it in a porous condition. Animal manures should be employed with the utmost caution, but a little artificial manure is of benefit in strengthening the plants. There is some diversity of opinion regarding the temperature which the young plants should have, some growing them warmly with slight ventilation. I rather prefer to grow them right on with free ventilation, and not much heat other than that derived from the sun. Growth is slower at first, but in the long run the cooler treatment is the more successful. I must not forget to note the serious effects that follow deep potting, and to this may be traced the deaths that occur in some collections.

Flowering stock is now awakening to fresh vigour after the weary winter, and will now respond to Nature's advances if frequent applications of manure are given. Plants in 5-inch and 6-inch pots may be repotted into those two sizes larger, and the whole examined for withered foliage. Stems from which the flowers have been cut still further shorten to well-placed young shoots, and tie all young shoots loosely but securely in before they lean over laterally. Seeds of Perpetuals should be sown at once, using very friable soil and germinating them in a temperature of 60° to 65°, in which the seedlings will very soon appear, after which transfer them to a lower temperature. Nothing is gained by sowing border Carnations so early.

R. P. BROTHERSTON.

DESIGN FOR A SMALL FRONT GARDEN.

I AM building a small villa for myself, and should feel favoured if you would kindly give me your views of the best way to set out my front garden. There is about twelve inches of good top soil; after that clay. Roses do very well. Would a sort of Dutch garden do, with Roses and old York paving?

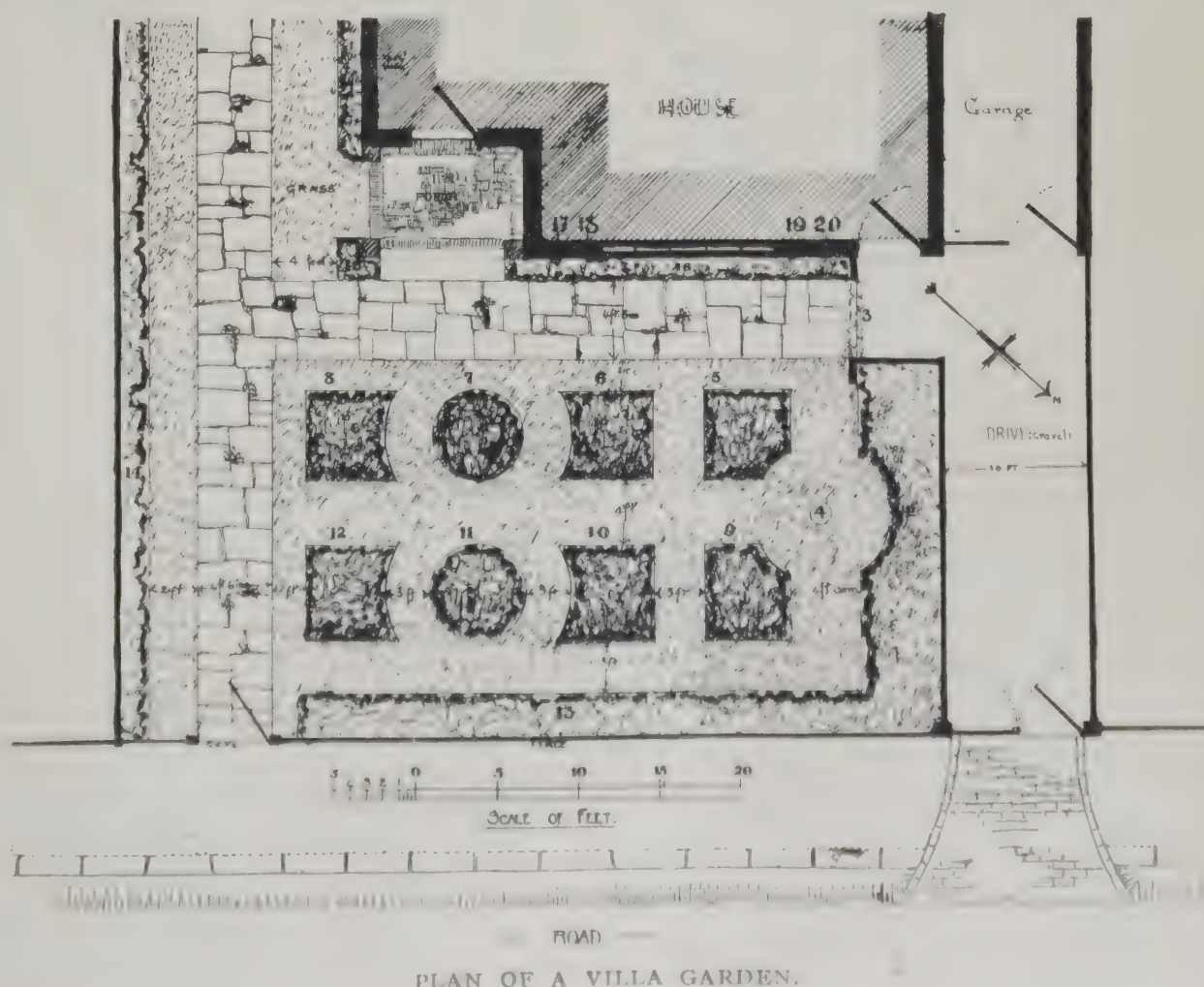
T. B.

[It is assumed that the owner of this villa does not wish to approach the front door by a road wide enough for vehicular traffic, and therefore has a considerable space to devote to gardening on this side of the house. To use his own words: "There is about twelve inches of good top soil; after that clay. Roses do well." Certainly, then, he should use Roses largely in the planting, and the design given in the accompanying illustration has been prepared specially with this in view. If the beds seen in the plan are too simple in outline, remember that Roses cannot be used successfully in beds of fancy shapes, because they will not fit to the beds when they grow.

Such Roses as are included in the planting scheme should have the longest possible period of flowering. Dwarf Roses only should be used in these beds, as the area is not large enough to overcome the aggressive appearance of standards. The design for a garden such as this cannot be too simple, and the only hard paths introduced should be between those points that *must* be approached. Roses, principally Hybrid Teas, that give the longest possible period of flowering are eminently suitable. It is better, however, to make provision for the introduction of a few other plants, as Roses by themselves are not attractive at certain seasons of the year.

1. Could be either trellis covered with pink Roses and pale blue Clematis, or an evergreen hedge to screen off the approach to garage.

2. This border could be filled with pink China Rose Hermosa and clumps of Lavender, with white Madonna Lilies in the corners.
 3. Trellis arch to screen off tradesmen's door.
 4. Lead figure or vase.
 5. Rose Caroline Testout, carpeted with Viola Maggie Mott.
 6. Rose Richmond and dark purple Viola.
 - 7 and 8. Various good Roses of similar habit of growth as desired, principally cream and pink shades, and cream Viola as edging or carpet.
 9. Rose Mme. Abel Chatenay and Viola Maggie Mott.
 10. Rose General Macarthur and dark purple Viola.
 11. Rose Hugh Dickson and purple Viola.
 12. Rose Warrior and purple Viola.
 13. This could either be Rose Fellenberg, allowed to grow into a hedge, or, if a solid fence is used on which climbers could be trained, it could be filled with the choicest and best Roses that do not make rampant growth; just a collection of "gems," the aspect being south-west.
 14. Repeat No. 2, training the longer growths of the China Rose against the fence.
 15. Wistaria sinensis or W. multijuga, and Jasminum officinalis major to train over porch.
 16. Border for bulbs, Wallflowers and a few summer-flowering plants; this border to be changed with the seasons and always kept bright. Also plant the following creepers to train on house;
 17. Clematis Nellie Moser.
 18. Jasminum nudicaule.
 - 19 and 20. Climbers to taste, remembering the aspect is north-east.
 21. Flower border, say, Nepeta Mussinii and pink Antirrhinums.
 22. Magnolia grandiflora trained on house.
- The grass area should not be an inch less than shown on plan. The paved walk from the front gate should lead to some definite feature in the gardens beyond.—ED.]



GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Late Vineries.—All late vineries should be shut up and started gently by March 1, as late varieties of Grapes require a long season to bring them to perfect maturity, and unless they are thoroughly finished by the end of September, the prospect of keeping them in plump condition through the winter will be much reduced. Very little fire-heat will be necessary for some time, as the temperature should not exceed 50° by night and 65° by day.

Early Peach-House.—The growth on early trees will be sufficiently advanced to require frequent syringing with clear soft water, to keep aphid and red spider in check. The final disbudding may now be accomplished, leaving a well-placed shoot as near the base of last year's growth as possible; another may be left between the base and the terminal bud if space will permit, but nothing should be left beyond what can be conveniently tied in without overcrowding the tree. Very little thinning of the fruits should take place before the stoning period is over, and then select the fruits on the upper side of the branches, so that they may be fully exposed to the sun. Attend to the disbudding of successional trees, removing a few buds from each shoot at a time, so that no check in the growth may take place.

The Orchard-House.—Give plenty of air to Apple and Pear trees which are in bloom, examine the pots twice daily, and give a good soaking of clear water when necessary. As soon as the crop is set, weak liquid manure may be given once or twice a week. Syringe the trees early in the day and avoid fire-heat as much as possible.

Plants Under Glass.

Chrysanthemums.—The earliest batch of plants will now be well rooted in small pots, and ready for potting into 6-inch pots. The soil may consist of two-thirds turfy loam and one-third leaf-soil, with sufficient old lime rubble to keep the soil porous. The pots must be clean and the soil made firm about the roots; replace the plants in a cold pit on a bed of ashes. No fire-heat should be applied if sufficient covering can be found to exclude frost. The pit should be kept closed for a week or more until the plants are established, after which air should be admitted in increasing quantities until the lights are removed on fine sunny days, the aim being to produce sturdy, short-jointed plants, and consequently crowding must be avoided.

Seed-Sowing.—Chinese Primulas for November flowering should be sown now. The soil may consist of fine sifted loam and leaf-soil in equal parts, with sufficient rough sand to keep the soil from becoming sour. Cover the seeds very lightly with fine sandy soil and place them in a temperature of 60°. If not already done, a sowing of Balsams, Celosia and Cockscombs should be made, also of Streptocarpus.

The Flower Garden.

Pentstemon Plants which were struck in cold pits during September should now be carefully potted into 3-inch pots and placed in a similar pit quite near the roof glass. Let the pit be kept closed until the roots are well established, after which air should be freely admitted until the plants are ready to put out about the first week in April.

Antirrhinums.—If these were raised from seeds in the autumn, they should now be ready for planting where they are to remain, and if lifted with a good quantity of soil about the roots, they will commence to flower early in the season and continue for a considerable time. It is not too late to raise Antirrhinums from seed for flowering in August and September.

The Pleasure Grounds.

Pruning Shrubs.—If not already done, this work should be finished with as little delay as possible, and the requirements of each individual plant must be considered as the work proceeds. A strong pruning-knife is the best implement for the purpose. Specimen Hollies should be carefully pruned, and, where the branches have become too thick and crowded, a few may be carefully cut and drawn out so that the plant may present a more natural appearance. Avoid pruning

Laurels and other large-leaved shrubs with shears, as by this means many of the leaves are cut and the plant made to present a most unnatural appearance.

The Hardy Fruit Garden.

Protecting Early Flowers.—In some districts Apricot flowers will soon require protection from frost, and this is best accomplished by thin canvas blinds, which should be drawn up every morning and run down again in the evening. Old fish-nets may also be used for the purpose, but care must be taken that neither covering comes in contact with the flowers.

Strawberry Plants for autumn fruiting which have been wintered in small pots may now be planted on a well-prepared border with an eastern aspect. These plants do not grow so large as summer-fruiting varieties, therefore it is not necessary to plant them so far apart. St. Antoine de Padoue is one of the best for this purpose, and continues to produce a supply of nice fruit until quite the end of October. Seeds of alpine Strawberries may be sown now for autumn fruiting.

The Kitchen Garden.

Parsley.—The main crop of Parsley may now be sown as soon as possible. An open position should be chosen for the purpose, allowing 18 inches between the rows. Cover the seeds lightly, with fine soil. Young seedlings raised under glass should be planted in a warm position as soon as large enough. This may prove a valuable crop in the early summer.

Cauliflower Plants which have been grown in cold pits during the winter should have the lights removed every morning and replaced again at night, in order to produce good stocky plants for planting early in April. Further small sowings of Cauliflower should be made from now till the middle of May. Magnum Bonum and Dickson's Great Dane are splendid varieties for sowing now.

Leeks.—The principal sowing of Leek seed should be made without delay. A good rich border should be chosen for this purpose, and the seeds sown in shallow drills a foot apart.

Chervil.—Where this is in demand, a small sowing should be made every ten days, and during the summer the sowings should be more frequent. *Royal Gardens, Windsor.* JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Celery.—Those who are expected to have Celery towards the end of August will require to make a small sowing now. Sow the seeds thinly and place them in a temperature of about 60°. When they have germinated, see that the seedlings do not suffer for the want of water at the roots, as this would assuredly cause them to bolt later. Perhaps there is no crop that will resent neglect in this way more than Celery. The plants will require careful attention right on till planting-time.

Asparagus.—Should the weather be favourable, Asparagus-beds ought now to receive attention. Have all weeds cleared off and give a good dressing of rich manure. On established beds especially this will be all that is necessary. Where it is intended to make a new plantation, the ground should be trenched to a depth of 3 feet, adding some well-rotted manure and burnt refuse as the work proceeds. Leave the whole in a rough state till the end of March, or in cold districts till the second week in April, which will be quite soon enough to plant.

Potatoes.—Early Potatoes may now be planted out of doors, say, on a narrow border at the foot of a south wall. Any of the early varieties now on the market may be planted, as, being against a wall, I find they are easily protected on the approach of frost or very cold weather.

Turnips.—Seeds of Early Milan Turnips may be sown in rows on a warm border. The Turnips, of course, must be used when quite small, otherwise they would assuredly run to seed.

The Flower Garden.

Sweet Peas.—Where Sweet Peas are intended to be grown in a row, it will be well to throw out the trench now, say, to the depth of 2 feet or so.

Leave this trench open until planting-time, when the soil will be pulverised and mellowed by the weather. Previous to planting, this should be filled in, with the addition of manure and fresh soil.

Anemones.—These beautiful perennials are becoming more popular than ever, and will well repay any little extra trouble one may take in their cultivation. To grow them well I find they require to be liberally treated. The present is a good time to plant. The ground, of course, should have been previously dug and well manured. Seeds may also be sown now of the beautiful St. Brigid variety. These will bloom towards the end of September. Being very slow in germinating, I find it best to sow in boxes and place them in a cold frame. They require careful handling until planted out.

Polyanthuses.—Now will be a good time to make a sowing of Polyanthuses; at least, we seem to get better results from this sowing than from one made out of doors in May or June. Sow in pans and prick out the seedlings when ready; these should make fine plants for putting out in the autumn.

Lobelia cardinalis.—It is very doubtful if this attractive plant receives the attention it deserves. Last season I saw a charming bed of East Lothian Stocks, with Lobelia cardinalis used as dot plants. As seen from a distance the effect was very striking. To produce such an effect the Lobelia should be divided now, potted, and brought on very steadily. If placed into a larger size pot before planting, so much the better. From seed sown now very good plants may be had by September.

Cannas.—The old stools should now be brought from their winter quarters, placed either in pots or boxes, and brought on gently in a moderate heat. Where it is intended to increase the stock, the old stools can be divided and potted up singly. Harden them off gradually, and see that they are not put out of doors until all traces of frost have disappeared.

Plants Under Glass.

Achimenes.—These beautiful stove plants, which seem almost indispensable for adding a little colour during the summer, should now receive attention. Shake them out and place them in shallow pans or boxes filled with sandy soil, say, about an inch apart. When they have made about two inches of growth, they may be potted or placed in hanging baskets. In the latter I find they are most effective. During the growing season they should be constantly syringed to ward off red spider, to which they are very subject.

Chrysanthemums.—From now till the beginning of March will be a good time to put in the main batch of bush Chrysanthemums. As the cuttings on the old stools are growing freely, care must be taken to select only sturdy shoots, and do not root in overmuch heat.

Begonia Gloire de Lorraine.—Plants that were cut back early will now be pushing up young shoots. They may be taken off and rooted where they can have a little bottom-heat. Plants that bloomed later should be cut back and syringed frequently; these will supply cuttings later.

The Hardy Fruit Garden.

Spraying with Winter Wash.—Should this most necessary work not have been done earlier, no time should be lost in going over the trees. To destroy insect-life there is perhaps nothing better than caustic alkali, and, like all other operations of this kind, it must be done thoroughly, so that every part of the tree is treated. Great care must be exercised to protect the hands and clothes, as this solution is extremely injurious to both.

Arsenate of Lead Wash.—It is a good plan to spray trees and bushes with this solution just as the flowers are opening, and again when the fruit has set. Arsenate of lead can now be had in paste form, and if used according to the directions, there need be no fear of doing damage.

Brambles and Loganberries.—These may now be planted and treated in the same way as Raspberries. Fruiting canes may now be tied up, and remember that there is nothing gained by crowding them together; in fact, when trained too close, it is almost impossible to get among them to pick the fruit. JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

HARDY CHRYSANTHEMUMS FOR FLOWERING IN NOVEMBER.

THE note by Miss G. Jekyll under the above heading in *THE GARDEN* of January 10 is most opportune. There are now a great number of beautiful Chrysanthemums that flower very satisfactorily outdoors during September and October, and the development of this section has been quite remarkable in recent years. I am quite in agreement with Miss Jekyll as to the value of those that come into flower in November, when outdoor flowers are so scarce; and the getting together of other varieties than those named in the note in question should not be a very difficult matter. The three varieties mentioned by Miss Jekyll are among the oldest now catalogued by the Chrysanthemum specialist. I cannot trace the date of the introduction of Emperor of China (syn. Cottage Pink), which I have seen luxuriating in cottage gardens in my autumn rambles through the country; but the variety Julie Lagravère, a dark crimson-red sort, was introduced by the late J. Salter so long ago as the year 1859. It is quite remarkable how well these old sorts retain their vigour. The foregoing are not large Pompons, but reflexed kinds. Sœur Melanie, raised by Lebois in 1869, is generally recognised as a hybrid Pompon, and is classified as a Pompon by the National Chrysanthemum Society. It is indeed a beautiful plant, and is more appreciated because it comes into bloom just as the plethora of the early flowering kinds is coming to a close.

In reply to the question raised, "Are there any more of this large Pompon class?" I am pleased to name a few varieties that are but very slightly known by the present race of growers. The Christine family is excellent for this purpose, and is represented by Golden Christine (golden bronze), Peach Christine (peach colour), Pink Christine (pink), Primrose Christine (primrose) and White Christine (white). These varieties have been in cultivation for many years, which speaks volumes for their vigorous and sturdy constitution. The plants come into flower during November. Dr. Sharpe, introduced in 1866, is a good rich purple magenta flower, and the plant is dwarf. The flowers, too, are fragrant. King of Crimson, another November-flowering variety, yielding large, full flowers of a rich crimson colour, is quite good and the plant is dwarf. This variety was introduced by the late J. Salter in 1845. Progue is another sweet-scented sort, of a rich amaranth colour. Some of the plants do exceptionally well against walls having a warm aspect. The foregoing are all reflexed kinds, and are larger than the series of Pompons I am now about to describe.

As far as I am able, I will arrange the Pompons in the order in which they bloom. A variety that has given me more than ordinary pleasure in the past is Lizzie George. It is a hybrid Pompon of a rich golden yellow colour that is in good form from the middle of October till the middle of November. The plants are a mass of glorious blossoms, and attain a height of not more than 2 feet. It is the best variety I know for the period. Crimson Précoce is a beautiful branching plant, evolving dainty, bright crimson blossoms in late October; height, 3 feet. Mlle. Elise Dordan, an ideal Pompon of a silvery pink colour, is very pretty

for late October and early November displays, and during the same period Mme. A. Colmiche, a reddish orange, is very useful; height, 4 feet. About the same time Sœur Melanie would come into flower. An excellent companion to the last named is President, a showy, bright rosy purple variety that is very popular in cottage gardens in this neighbourhood; height, 3 feet. For November flowering the following varieties will provide an interesting series of reliable plants: Mrs. Bateman (a large orange brown, dwarf), Rosinante (1856, blush rose, dwarf and fine), Nelly Rainford (buff yellow, sport from the last named), Osiris (rosy purple, shaded and tipped salmon), Prince of Orange (a fine, light orange amber coloured flower), Rose d'Amour (a pleasing rose-coloured sort), Florence Carr (a deep bronze variety, little known, but very attractive), William Kennedy (a rather large crimson amaranth flower of great beauty), and William Westlake (a beautiful canary yellow sort, sometimes suffused red, good habit and free flowering).

There are two families of exceptionally bushy, free-flowering dwarf Pompons that make very attractive bushes. One is the Cedo Nulli, represented by white, lilac, and golden varieties, and the Trevenna family, in which there are golden, rose, and white kinds, all most interesting. Two miniature-flowered varieties that should not be omitted are Snowdrop (white) and Primrose League (primrose). The flowers of these two sorts are of exquisite shape, and are freely evolved in very handsome and attractive sprays in the latter half of November. I could mention others that, I fear, are not now in general cultivation; but I have little doubt that the varieties enumerated will provide a welcome display outdoors later than usual, should the weather be kind and sheltered quarters be provided.

Highgate, N.

D. B. CRANE.

POTATOES SUITABLE FOR PLANTING ON INFECTED PREMISES.

THE Board of Agriculture and Fisheries desire to remind all occupiers of premises declared infected for the purpose of the Wart Disease of Potatoes Order that it is illegal to plant any Potatoes on such premises unless a licence has previously been obtained from an Inspector of the Board or of the local authority. The penalty for any contravention of the Order is a fine not exceeding ten pounds.

Such licences can, however, as a rule be obtained on application to the Board by any occupier who undertakes to obtain from a reliable dealer one or more of the varieties of Potato referred to here, all of which have been tested, some of them for several years, and have been found to resist wart disease under ordinary circumstances.

Should any occupier have any difficulty in finding a Potato dealer who can supply the variety he wants, the Board will, on application, send a list of dealers who have undertaken to stock these Potatoes, with a statement as to the varieties which each is able to offer.

Milecross Early.—White, round, not liable to ordinary Potato disease (Phytophthora), matures rapidly, haulm strong and quality good.

Conquest.—White, round, heavy cropping, second-early Potato of good quality; must be

earthed up high, as tubers are produced near surface.

Jeanie Deans.—A fine oval Potato with strong haulm and white flower. Crops heavily on light, rich soils. Stocks of this variety are not large.

Dobbie's Favourite.—A second-early, round in shape, white flower; an excellent Potato when well grown.

Abundance.—A well-known heavy cropping, late variety, oval in shape, of good quality, rather liable to ordinary disease; white flower.

Sutton's Supreme.—A second-early of pebble shape, white flower, suited to garden cultivation.

Great Scot.—A very good second-early; white and round, eyes rather deep; haulm robust; a very heavy cropper under good cultivation. Quality excellent; flower, white.

Schoolmaster.—A second-early, white-skinned and round; crops well, but is liable to ordinary disease. Not a good keeper.

Crofter.—A late, oval Potato of good quality; liable to ordinary disease. Flower, white.

Culdees Castle.—A pebble-shaped variety, not quite so strong in the haulm as Crofter, and liable to produce more seed size tubers on light soil. Does well under garden cultivation. Flower, white.

White City.—A late, kidney-shaped variety. A fine Potato for garden cultivation, but not a heavy cropper. Under high cultivation tubers are frequently hollow. Of first-rate quality. Flower, lilac.

Provost.—A late, white, round Potato possessing strong haulm and white flowers; well suited to garden cultivation. "Seed" should be changed every second year.

The Admiral.—A late variety, white-skinned and round. Haulm medium, a heavy cropper and good disease resister. Quality excellent. Flower, white.

Irish Queen.—Tubers round, eyes rather deep, haulm strong. Excellent cropper. Keeps late into season.

St. Malo Kidney.—Tubers coarse, kidney-shaped. Haulm robust. Not a good keeping variety.

King George V.—An elongated oval tuber, skin netted, eyes shallow, haulm strong. An excellent cropper. Quality moderate.

Davie's Laird.—Roundish tuber, flesh white. A robust variety that crops heavily on well-prepared medium loams. Quality excellent.

Flourball.—Well-known late variety, round and pink-skinned. Eyes rather deep, haulm straggling with bronzing on stems when exposed. Quality very good; flower, white.

Golden Wonder.—A late, white-fleshed kidney with yellowish brown tinge on skin. The "seed" should be a good size, and if unsprouted should be planted before the end of March, as the variety requires a long growing season. Liberal manuring is essential, and in gardens bastard trenching is recommended. It is possessed of excellent quality, and is one of the best late keeping Potatoes. Flower, mauve, tipped white.

Peacemaker.—Is similar to Golden Wonder.

Langworthy.—A late, kidney-shaped Potato possessing white skin and flesh. Tubers that are fully developed may generally be recognised by the characteristic tapering "heel." Quality excellent. Same treatment required as for Golden Wonder. Flower, mauve, tipped white.

What's Wanted.—Shape not so constant as in Langworthy. In other respects very similar.

N.B.—The last four varieties mentioned are, relatively speaking, light croppers, but they are

probably unsurpassed as resisters of ordinary Potato disease.

This list is not exhaustive, and there are several other varieties which are resistant. They are not quoted, as the supply of Potatoes of "seed" size is believed to be small.

PRACTICAL HINTS ON AURICULAS.

THE seasonable notes on Auriculas appearing month by month in THE GARDEN are much appreciated by Auricula-growers. The writer of these, in his last notes (page 67, February 7 issue), says: "Should the weather keep open and mild, the plants will be very active at the roots." At the time I am writing, all this has taken place, and the plants are passing from their winter rest to the period of their greatest activity, the new growth is pushing up, and, as it develops, the enthusiasm of the Auricula-grower is fanned into full flame again. What pleasure this gives to the ardent Auricula man as he visits his frames during the early spring months! To see the close, hard crown of the plants gently unfolding, displaying bright, fresh leaves, some green, others green with a delicate edge of white meal, some so covered by the meal that they appear to be grey and others quite white, is a pleasure that can only be appreciated to the full by the lover of these chaste plants who has cared for them since repotting-time some seven or eight months ago—months of loving care and attention, watering as needed, shading from the heat of the summer sun, keeping down the attacks of aphids and, later, the removal of withered leaves and transferring the frames to a sunny situation for the winter.

The full reward for this care is about to be reaped as the plants develop into full and mature growth and bloom. My appreciation of the Auricula is almost as great during March and early April, when it is unfolding its leaves and showing its bloom-truss in the heart of the plant, as it is in late April and early May, when in the full glory of its chaste and varied coloured blooms. At this time of year the keen grower is not likely to neglect his plants.

Top-dressing.—I agree with the writer of seasonable notes that top-dressing as practised by the growers of years ago—the taking away of an inch or so of soil and replacing by fresh compost, as recommended by Emmerton in his book, published in 1819—is largely superfluous; but at the same time I would recommend that where a plant, on account of growth made, has a portion of stem exposed, it should have this stem covered by an application of fresh soil in order to encourage new root growth.

The Auricula is not over-fastidious as to the soil in which it will grow, provided it be thoroughly fresh and sweet. A suitable compost for the purpose of this top-dressing would be four parts loam of medium texture, one part leaf-mould, and one part thoroughly rotted hot-bed manure, with half a part of sharp sand added. Press this compost firmly round the collar of the plants up to the base of the leaves.

Seed-sowing.—Now is a good time for the beginner in Auricula-growing to put in some seed, but not the kind that is sold at a few pence per packet, for, from the Auricula-grower's point of view, this is worse than useless. Not only are the

plants raised from it of no value, but the time spent on it is wasted. The seed from which most pleasure and success is obtained is that which is home grown and cross-fertilised by hand; that is, supposing you have a collection of the best varieties to work with. This, of course, is beyond the reach of the beginner, so do the next best thing and get your seed from a grower of repute, even if you have to pay 2s. 6d. for a packet, and leave the cheap seed severely alone.

I would suggest that the beginner commence with seed of the alpine section, as being easier to grow and giving a larger percentage of good flowers than does the show section.

Use seed-pans or pots in which to sow the seeds, as, owing to its slow germination, the pots have to be kept eighteen months or so, and boxes in that time often decay and break.

I will not enlarge on the process of seed-sowing, as I take it for granted that this is already understood by anyone who undertakes Auricula-growing. Sow thinly and cover the seed with a light covering of soil about the thickness of a shilling; put a sheet of glass on the pot, stand in a cold frame away from the direct rays of the sun, and see that the soil is not allowed to become dry. The seedlings will be six or eight weeks before they begin to appear, and some will not germinate for twelve months. I will close by wishing all Auricula-growers a good season with their plants, and by hoping that many recruits may be gained to the societies.

G. J. S.

DAFFODILS IN NEW ZEALAND.

I HAVE read the article, "Daffodils in New Zealand," by Mr. A. E. Grindrod of Auckland, with much interest, and consider that we have much to thank him for in drawing attention to the way the cult has found enthusiastic adherents in this part of the world. There are one or two things in it to which exception may be taken. He says: "There are, I understand, no growers in our capital province (Wellington), though Mr. Thomas Mason (now deceased) raised some good things which have unfortunately gone astray."

I will take the first part of the sentence, where he says that he does not know of any growers in the Wellington Province. There are several who are actively engaged in the work. Mr. Joseph Weightman has been crossing and hybridising for some years now, and has some really fine things. He has succeeded in lengthening our Daffodil season considerably, as he has a flower which he has named Harbinger that is in full bloom in May, before many of the other varieties are showing through the ground. He also has some very fine tridymus which surpass any of the varieties I have seen that are in commerce. He has paid great attention to white trumpets, and has some really fine varieties. One he calls Mrs. J. Weightman is a grand flower of great substance. Another trumpet (unnamed) is a distinct khaki in shade. His collection of seedlings must comprise some twenty to thirty thousand bulbs, and there are plenty among them that will be welcomed when he can be persuaded to put them on the market.

There are others who are raising seedlings, notably Messrs. A. J. Hobbs and Buckingham of the Lower Hutt. These men are keeping careful notes of their crosses and the results, and have got at least two that are a due reward.

One is a large bold trumpet with plenty of substance in the cup and perianth, and the other is an incomparabilis with white perianth and a creamy coloured, much-expanded cup with a distinct band of deep apricot round it.

In reference to the late Mr. Thomas Mason, I should like to tell Mr. Grindrod that all his seedlings have not gone astray. Some of them are still being grown and looked after by his children. When Mr. Mason raised his seedlings he was doing a pioneer's work and had not got the splendid articles in THE GARDEN that we now have to encourage and guide us in the right direction. Consequently, many of those that he considered superior to those of his day are superseded now. I can easily remember the pride with which he showed some seedlings of Sir Watkin and his explanation that this variety rarely seeded in England. He thought a great deal more of selection than of seed-raising, and said that selection would play a very important part in the future. In respect to one variety, Sir Watkin, he was quite right, as his selection of this variety is superior to anything I have seen. He always considered that New Zealand was an ideal place for bulb culture. I have seen some of the bulbs raised in Auckland, and quite agree with Mr. Grindrod that they are good.

What is wanted in New Zealand is a series of shows beginning with Auckland, then Wellington, Christchurch and Invercargill in rotation, and a committee of "daffys"—I beg your pardon, daffodilists—to go from show to show and then sum up the best of the seedlings from notes taken en route. Owing to the length of the Dominion from north to south the seasons vary considerably, and while Auckland's gardens are ablaze with Daffodils, those in Wellington are only just opening, and so on down to Invercargill.

Feilding, New Zealand.

FRANK MASON.

[We thank our esteemed correspondent for his most interesting article and kind remarks about THE GARDEN. We shall be pleased to send a specimen copy free to anyone specially interested in Daffodils in New Zealand.—ED.]

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

VALUE OF BELAMCANDA SINENSIS (A. B.).—The plant is not of much value, and only cultivated by a few amateurs or specialists. As a market plant it is not in demand, and the best way to dispose of the plants would be to advertise them for sale at a cheap rate in THE GARDEN.

INJURY TO VIOLET LEAVES (Alfriston).—The material sent is insufficient to enable us to be sure of the cause of the trouble from which the Violets are suffering. Can you send us some roots? The roots of Violets are often attacked by the root eelworm (see answer to a correspondent in our issue for February 7) and sometimes by a fungus, and it is very desirable that we should have complete plants to examine.

THE GARDEN.

No. 2206.—VOL. LXXVIII.

FEBRUARY 28, 1914.

NOTES OF THE WEEK.

Solomon's Seal as a Pot Plant.—The graceful and pleasing habit of this old favourite plant is well known, although it is very seldom used as a pot plant. Pieces of root placed in pots now and grown on in a little warmth will soon give a good display of fresh green foliage—which is much brighter than when grown in the open—and drooping flowers. A few plants of this mixed among other flowers will greatly improve the appearance of the conservatory. The plant is readily accommodated and easily forced into bloom in an ordinary greenhouse.

Autumn-Fruiting Raspberries.—These should be cut close to the ground each season, as the fruit is produced on the current year's growth. It is good practice to lift and transplant part of the stock each season, as by this means the production of suckers is reduced and a larger quantity of fruit obtained. Although these are not so extensively grown as one might expect, they are worthy of a place in every garden, and should be planted with a view to extending the soft fruit season. Alexandria and November Abundance are two of the best. If not already done, Raspberry plots should be lightly pricked over and a surface-dressing of manure given.

Cypripedium fairrieianum Losing Vigour.—It is stated by more than one Orchid-grower that the plants of *C. fairrieianum* are beginning to lose their vigour, as did the first importation. The reason given by a contributor in the current issue of the *Orchid Review* is that the plant resents too moist and even airs and temperatures. Its habitat is no longer a secret, and it grows at a considerable elevation where the nights are cool and where the sky is clear. This species is said to enjoy the same conditions as *C. insigne*, except that it likes a warmer position in the summer. Those whose plants are seeming to dwindle and losing vigour are advised to give them a more airy and colder treatment in the winter, and a sunnier and more open-air treatment in the summer.

An Early Yellow Hyacinth.—Yellow is the last colour that the Hyacinth "took on." It is only in consonance with this fact that all those of this colour are, as a rule, late-flowering. A variety that will flower in the first half of February with ordinary greenhouse treatment is one to make a note of for another year. We recently saw a small batch of Buff Beauty, and were much attracted by both its colour and its spike. It may be described as a pale buff, with a long, well-filled, but not overcrowded truss of semi-

double, good-sized bells. The stem is wiry and strong, which is a decided advantage. Buff Beauty is quite distinct in colour to Orange Boven, a ruddy orange, to which we called our readers' attention this time last year.

Young Asparagus Sprengeri.—Although everyone knows the utility of the long sprays of this "Asparagus Fern," as it is so often popularly but erroneously called, there may be some who

After these have served their purpose, they may be thrown away and the same process repeated next spring, as the seed is both cheap and easily obtainable.

Erica carnea in the Rock Garden.—At this time of the year *Erica carnea* is greatly appreciated by virtue of its masses of pink flowers. It is a low-growing species, not exceeding 6 inches in height, and it never fails to produce a carpet of bloom in February and March. It is an excellent subject for planting in the foreground of the rock garden, where the flowering branches are allowed to grow more or less unchecked over the fringe of rockwork. Like most other Heaths, it spreads rapidly in a sandy peat soil, or it may readily be grown in a loamy soil if there is no lime present.

An Early Flowering Plum.—*Prunus Amygdalus persicoides* was in full flower on February 22, or just a month later than last year. As a rule, it is at its best about the first week in March in the neighbourhood of London, or about a fortnight before the ordinary Almond. Its almost white blossoms are quite as large as those of *P. Amygdalus*, and are borne with equal freedom; therefore it might well be planted with a more lavish hand than at present, for all trees and shrubs which hasten spring by blossoming early are deserving of every encouragement. There is some doubt as to the origin of this particular variety, and some people consider that it is a hybrid between the Almond and the Peach. To be well placed, it should have a background of dark-foliaged trees, otherwise the effect of the flowers is partly lost.

Rock Gardens at the Chelsea Show.—It is within the bounds of possibility that the Royal Horticultural Society's show to be held at Chelsea in May will be minus the rock and formal gardens that last year were so great a source of interest to visitors. Rightly or wrongly, the society has imposed very severe restrictions on outdoor exhibitors. The latter argue that exhibitors in the tents have shelters and any necessary



ERICA CARNEA, A BEAUTIFUL HARDY HEATH THAT IS FLOWERING NOW IN THE ROCK GARDEN.

have never tried it as a pot plant in a young state for room decoration. If seed is sown now in 2½-inch pots—one seed in each little pot—and the whole batch plunged in a seed pan or box filled with fibre, germination soon ensues. The little plants may be grown on where they are until they are almost root-bound, when they may be potted on into 3½-inch pots. If these are well looked after, they will next year make most useful little bushy plants for room decoration, and be a welcome change from true Ferns.

staging provided free by the society, which is put to no corresponding expense in connection with the outdoor exhibits. Granted that the society is bound by its agreement with the Chelsea Hospital authorities, we think that some leniency might be shown towards the outdoor exhibitors. The rock and formal gardens are, if the weather is fine, the greatest attraction of the show, and the Council might guarantee some, at least, of the expense of repairing any damage that may be caused to soil and turf.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Caterpillars on Cabbage.—These may easily be killed by syringing with a solution of nitrate of soda in water, 2 per cent. to 4 per cent. For caterpillars on Gooseberries the same means may be used, but the Gooseberry bushes will not stand more than 1 per cent. to 2 per cent.

Viola odorata Kaiser Wilhelm II.—This is identical with Princess de Galles (Princess of Wales). It is a splendid Violet where it finds suitable conditions, but this very rarely happens. Ascania or Baroness Rothschild, which is said to be the same, generally succeeds much better, and it is quite as good.—J. S. Rus, Denmark.

Ceanothus Gloire de Versailles.—In your issue for February 7, page 73, it is stated that this shrub will not stand cold. Here in a very windswept place I have a Ceanothus Gloire de Versailles growing in a bed that is situated in a draught between a wall and the house, so draughty that I have to tie all the branches to stakes for the winter. The plant stands north and north-west frosty winds, grows 2 feet a year, and is full of bloom each summer.—HENRY TOLSON, Poppleton, York.

A New Winter-Flowering Begonia.—By the courtesy of MM. Lemoine et fils, Nancy, I am in receipt of a description and photograph of a new winter-flowering Begonia which they think highly of and intend to put into commerce during the coming summer. As these raisers have given us so many fine varieties, including the universally popular Gloire de Lorraine, it is evident that their knowledge of these beautiful plants is considerable. The variety, which is named Nancy, was awarded a certificate of merit by the National Horticultural Society of France in January, 1913, and a work of art at the Paris Autumn Exhibition in October of the same year. It is the result of a cross between *B. socotrana* and *B. Baumannii*, a tuberous, sweet-scented species from Bolivia. This new variety will flower from October to March. The leaves are round and peltate, and the flowers, produced well above the foliage, measure from 2 inches to 3½ inches in diameter. They are of a bright carmine rose, and are slightly scented. Although the male parent is a tuberous species, the hybrid does not produce tuberous rootstocks, and there is no marked period of rest; in short, the variety Nancy may be given much the same treatment as Gloire de Lorraine.—H. P.

Hardiness of *Spiræa lindleyana*.—I was interested in your notes *re Spiræas* in the February 14 issue of THE GARDEN, page 82. You mention that *S. lindleyana* is not quite hardy except in Devon or Cornwall. It may interest your readers to know that here in Woodford we have a specimen

which has wintered three or four seasons outdoors, and is now again in bud. It grows very rapidly, without the least shelter or care, in a garden facing the open country.—F. O. LOUDEN, London House, Chigwell Road, South Woodford.

Rhododendron moupinense.—In reference to this *Rhododendron*, illustrated on page 96 of THE GARDEN for February 21, it was found by Mr. E. H. Wilson in Mupin in September, 1908, and the seed came to England in the spring of 1909, so that this seed has been in England just five years. He found it again in October, 1910, and sent seed to England in March, 1911, so that there should now be many plants of it in cultivation. Mr. Godman of South Lodge, Horsham, flowered it last year.—J. W. C.



BEGONIA NANCY, A NEW WINTER-FLOWERING VARIETY WITH BRIGHT CARMINE-ROSE, SLIGHTLY SCENTED, BLOSSOMS.

Sweet Pea Diseases.—One reads with interest Mr. F. J. Chittenden's remarks on page 79, February 14 issue. Personally, I cannot grasp just what is meant by "a check." One treats their plants with infinite care, yet streak comes along. Years back I always shook out my plants, and yet they recovered from such a check, often lasting a month when chilly winds followed planting. In more recent times I have planted from pots, but streak still remains with me, despite the fact that within the past eight years I have moved four times, on each occasion planting my Sweet Peas on ground that has never before seen such a crop. Successive years of streak attack have made me less and less inclined to spend extra labour on Sweet Peas, and last year, with just plain digging and moderate manuring, I got my plants to

last well into August, a gain of nearly a month. My own view is that dryness causes more disease than moisture, providing, of course, that the soil is not stagnantly wet. Sterilisation has not yet proved its worth. I have chemically treated my ground, without results, while one well-known grower even steam-sterilised many tons of soil, but streak was as bad as, or worse than, ever.—T. W., Kent.

Colour Effects with Annuals.—The criticism of your esteemed contributor, Mr. Turner, on page 79, February 14 issue, has been most welcome and instructive to me, as I happened to be responsible for the planting of the borders illustrated in the coloured plate in the January 3 issue of THE GARDEN. Upon taking charge of these gardens a few months previous to the planting

season, these borders were known as herbaceous borders, and were in a dilapidated condition. I came to the conclusion that the prospects of a display were remote. The plants were taken out, and as the borders had not had consideration in the seed order, I had to make the best of what I had, and I reluctantly introduced the white and blue which have drawn the criticism. Coming to colour effect, I agree with Mr. Brotherston's remarks (page 30, January 17 issue), and would reject blue where pink and carmine are associated, especially so in this case, where the background is a high hedge and dense trees. Personally, I am inclined to think Mr. Jenkins' remarks (page 8, January 3 issue) were based solely on a display of annuals, rejecting colour effects altogether; and I believe there are many employers who prefer a great show of colour to the much-preferred arrangement for colour effect. The diagram shown by Mr. Turner will doubtless prove of great assistance to many during the next few months, and no doubt Mr. Brotherston will lay before your readers an article on this interesting subject.—WILLIAM H. DUROSE, The Gardens, Westwood, Tilehurst. [We hope Mr. Brotherston will do so.—ED.]

Cyclamen Monstrosities.

Looking over the various groups of Cyclamen on the second Royal Horticultural Society's meeting in January, one could not help contrasting the clear-cut, neatly

thrown back, typically petalled varieties with the heavy and deformed-looking crested and fringed modern developments, which, I suppose, are only tolerated because we live in an age when novelty seems to have run mad. How unlike our old, smart, well-groomed favourites are the gorged, grovelling and grotesque gruesomenesses that we only know are intended to be flowers because they are placed at the ends of the peduncles! Quoting from an old poem on gardening:

"Flowers their Titles must to Merit owe

In Flora's Commonwealth, as they shall blow:

Must lose their Peerage, if they run away

From their true colours, and the false display."

How much more when it is form and not colour!—JOSEPH JACOB.

PEAT MOSS MANURE: IS IT INJURIOUS?

THE letters on this subject that we published last week have created a great deal of interest. Below we publish a further selection.

WE have found the peat moss litter manure very useful here, and used (before the days of the motor omnibus) a good deal of it at one time. It is very fiery stuff, and should stand a year in a heap before using. We have only used it as a top-dressing and mulching, or for digging in for rough crops. I should not dig it in for roses and such like, but we found it very good for working into ground before sowing poppies. The great thing is to let it ferment for a year. It is dangerous stuff in the fresh state.

Royal Gardens, Kew.

W. J. BEAN.

IN our opinion peat moss litter manure should on no account be dug into the soil, as in many instances we have known it to set up a fungus which has badly affected plants, and we consider it very much inferior to straw manure.

Wordsley, Stourbridge. E. WEBB AND SONS.

I AM interested in the question of peat moss litter manure. I went into the subject some time ago and compared notes with others, and the result was that I was driven to the conclusion that the peat moss manure was quite good, although in certain circumstances it was injurious. This, I thought, and still think, was caused by the litter absorbing an excessive quantity of urine and being applied too fresh. In light soils I consider the peat moss litter manure more beneficial than in heavy soils. A point which seems to have largely escaped attention has been the acidity of some peat, but this may be rendered innocuous by the drying process. A very large grower of early Potatoes here secures all the manure from the large horse-keepers in town and carts it away daily. He makes a large heap, which lies until required, and this contains a big proportion of peat moss manure, which is much used by horse-keepers here. He allows the same price as for the straw manure, and I am sure he would not do so if he were not convinced of its value. Personally, I would prefer straw manure if I could get it, but I could not hesitate to use the other.

S. ARNOTT.

Sunnymead, Maxwelltown, Dumfries.

I HAVE used peat moss litter a good deal, and it would be excellent were it not for a tendency sometimes to engender fungus, owing, I imagine, to the source of the peat. I would not, however, prefer it to well-decomposed farmyard manure, because here we have the manure both of cow, pig and horse; but if I were confined to ordinary stable manure as often cleared out of stables where carriage horses are kept, I think I should prefer the peat moss litter. The peat absorbs the urine, which renders it a very powerful manure, and if mixed with the soil, care should be taken to keep it well away from roots. Undoubtedly its chief value is as a top-dressing. If the soil is covered thinly with it at intervals, it is a fine stimulant, and the after-hoeing blends the peat with the soil, thus creating a nice humus, and it keeps

the surface soil in a nice workable state. Perhaps a blending of the two, peat litter and farmyard manure, would be an ideal manure.

W. EASLEA.

Danecroft Rosery, Eastwood, Essex.

I HAVE used peat moss litter manure quite successfully, and never noticed any bad results, though for choice I prefer straw manure.

EDWIN BECKETT.

Aldenham House Gardens, Elstree, Herts.

THE origin of the manure in the first place may exert a considerable influence on a crop. That from a stable where a few horses are kept may be much better than that from a stable where from fifty to a hundred horses are littered each night and where quantities of disinfectants are used, or where the litter is allowed to become saturated with urine. Then the nature of the land and the character of the crop have to be taken into consideration. When used as a surface-dressing, it is pretty generally admitted that it does little or no harm, but when dug into the ground in a fresh state it has certainly had a detrimental effect on certain crops.

An article on peat moss litter manure appeared in the *Kew Bulletin*, No. 8, 1911, pages 349-51. In this article reference is made to its deleterious effect upon certain plants after it had been inadvertently dug into beds, though it had been used as a top-dressing for a considerable time without ill effects. Samples of the soil and the manure were examined by Dr. Voelcker, and the following paragraphs, a portion of his report, are taken from the above-mentioned article: "I have come to the conclusion—from my examination—that the ill effects in the present case are due to the marked acidity of the manure, this acidity being due to organic acids in the manure and not to mineral ones. I find in the soil (in which the manure has been used) iron compounds present in the ferrous—or not fully oxidised—condition, and it would seem to me likely that these are the result of the liberal use of an organically acid body such as the peat moss, and that an unhealthy, imperfectly oxidised condition of the soil has been brought about.

"Very probably if the manure be kept longer and allowed to rot more thoroughly, it becomes more aerated and oxidised, and then would not show the ill effects noticed."

W. D.

MY own experience with peat moss litter manure, agriculturally, has been favourable. It can be ploughed into ordinary lightish soils and loams without any bad effect whatsoever. Horticulturally speaking, I am led to understand that it should be used primarily on light soils, since in heavier ground it is apt to produce insufficient aeration, and tends to cause sourness. In this way it would simply fall into line with the usually accepted rule to use long manure on heavy soils and short manure on light soils. Its absorbing power for ammonia is very much greater than that of Wheat straw, and consequently as a manure it should be fairly rich. It decomposes, however, rather slowly in the soil. The composition of peat moss itself shows it to contain 0.7 per cent. nitrogen, 0.1 per cent. phosphoric acid and 0.1 per cent. potash.

University College, Reading. S. J. M. AULD.

YOUR correspondent is correct when he states that peat moss litter has no manurial value in itself, but we cannot agree with him when he says that it would be dangerous to dig peat moss litter manure into the soil. The general opinion regarding this manure, as gathered from the various articles and replies to correspondents appearing in the agricultural and gardening papers, is that it is quite as useful as straw manure; but we would like to point out that it is necessary for it to be properly treated before it can be used. Moss litter itself contains a certain proportion of humic acid, and even after use in the stables there is still some of this left; consequently, it should not be put straight on to the land, unless mixed with lime to neutralise the acidity. Although some people do put it straight on to the land, it is far better to make a heap of it and let it stand for a few months before using, in the meantime saturating it with water or liquid manure, and turning it several times to expose it to the air and get rid of any trace of the acidity. Comparing peat moss with straw manure, the former proves to be twice as rich in nitrogen as the latter, and this is, of course, of considerable value. Dr. Watts gives the following analysis:

	Straw.	Peat Moss
Water	75.42	62.53
Organic matter ..	16.53	21.14
Phosphates ..	0.96	2.56
Alkaline salts ..	4.43	3.60
Insoluble matter ..	2.66	2.17

	100.00	100.00
Containing nitrogen ..	0.61	1.24
Equal to ammonia ..	0.74	1.50

Experiments have been conducted to ascertain the value of the two kinds of manure, and we may briefly mention the result of trials at the Cockle Park Demonstration Farm, Morpeth (see the *Journal of the Board of Agriculture*, September, 1906). The manure was applied to two plots on light soil for Swedes, with the result that 12 tons of moss litter manure gave 25.7-10 tons of Swedes an acre, while 10 tons of straw manure gave 23½ tons of Swedes an acre. The report further states that all through the season the Swedes manured with the moss litter looked best. One of your contemporaries had an article on the value of peat moss litter, in which reference was made to the unfavourable report from Kew on peat moss litter manure. The writer, Hjalmar von Feilitzen, Ph.D., Director of the Experimental Station of the Swedish Peat Society in Jököping, says that the results obtained at Kew do not agree with those of other countries, and he gives a brief account of his experience. He finds that the effect of peat moss litter manure on vegetables was always better than that obtained from other litters, and on garden plants and flowers very favourable. The manure was used both as a top-dressing and mixed with the soil. The writer concludes by saying that as regards the unfavourable results obtained at Kew, there is no evidence that it is due to the moss litter used, as no comparable experiments appear to have been made.

THE PEAT MOSS LITTER SUPPLY COMPANY, LTD.

FORTHCOMING EVENTS.

March 3.—Scottish Horticultural Association's Meeting.

March 6.—Dundee Horticultural Association's Meeting.

March 10.—Royal Horticultural Society's Bulb Show (two days).

JUDGING EXHIBITION VIOLAS.

[In Reply to a Correspondent.]

THE question raised is one that constantly recurs as each successive exhibition period comes round. How to judge a show Viola is not so easy to answer as



A GOOD EXHIBITION BLOOM OF FANCY VIOLA MAVOUREEN.

many people may imagine. So far as I am aware, there is no published record of what are the properties of a show Viola. I have looked into old publications dealing with the show and fancy Pansies, and I find that to make the show Viola conform to rules laid down for blooms of the show and fancy Pansies, as regards their properties, would be to lessen the beauty and charm of the Viola. The show Pansies are so distinct from the Violas as we know them to-day; the latter are so free and graceful in their character, and they possess a beauty peculiarly their own. No hard-and-fast rule can be laid down as to what a good Viola should be, and this remark applies to the question of size, form, colour or marking.

Beauty in respect to form, whatever the type may be, colour and marking, each has to be considered by those appointed to judge exhibition blooms, and the better these points are exemplified in the flowers set up for adjudication, the more will they commend themselves to judges who are true florists. Points worthy of consideration are the following: Size.—There is a tendency to give too much attention to size, to the exclusion of many flowers of smaller varieties that possess points of quality far in excess of those seen in the unduly large flowers that are often very coarse. It is not difficult to determine what are well-grown flowers, and if these are a little above the average size, they always look well. In whatever way

the flowers may be set up, whether it be in sprays, as was the rule years ago, or in bowls filled with sand, the blooms should be of consistent size and form. Prizes have often been lost because an exhibitor has arranged in a spray, &c., one or two undersized blooms. In such cases the better blooms have set the standard of quality, and the smaller ones have exhibited how far they have fallen short of the standard.

Then as regards colour, this, too, should be consistently good. Care is very necessary when gathering the blooms that the self-coloured sorts should be as nearly alike in colour as possible, and that fancy and edged flowers should be even in their markings and margins. In the nineties, when twelve sprays of Violas were set up, it was customary, in the classes for six blooms in each spray, to give one point as a maximum for each bloom, so that it was possible to obtain seventy-two points for a series of perfect sprays. In very close competition additional points were awarded for variety, arrangement and general effect. This system of awarding points works out very well, for in ordinary competitions, by allowing one point to each perfect bloom as a maximum, this may be reduced by fractions or otherwise in proper ratio for blooms less perfect. The total number of points gained by each competitor can then be very easily determined.

Other considerations that are important in exhibition Violas are the following: Small, neat, bright eye; flowers that are well balanced, absence of ragged or notched edges, freedom from waviness and blemishes, such as punctures by insects and dirt splashes. Most important of all, the flowers should be absolutely fresh. Stale flowers and any that may be in the least disposed to curl at the edges should be discarded in favour of fresh blooms, even though they may be smaller. Preference should be given to blooms of stout, velvety substance, with the petals lying evenly and closely upon each other. Such blooms invariably last longer and maintain their fresh-

ness throughout the day of the show. The "Rules for Judging" issued by the Royal Horticultural Society defines the points in judging Violas as follows: (a) Good outline and stoutness of petal, one point; (b) smoothness of petal and edge, one point; (c) in selfs, well-defined colour, one point; (d) in belted and blotched flowers, harmony without confusion, two points; (e) erect, stout stems, blooms facing well to the front, one point. Each of these points has practically been dealt with in these notes, so the matter should now be perfectly clear. One judge who knows his business could judge the flowers quite satisfactorily; but, so that suggestions of incompetence or uncertainty shall not be made, it is much better to obtain the services of two men who know the Viola and its varieties, and in case of a disagreement it should be possible to call in an umpire.

Highgate, N.

D. B. CRANE.

WHY FORCED BULBS FAIL.

EELWORMS EATING THE ROOTS.

FOR a long time I was uncertain whether eelworms (by this term I do not mean the real creature, *Heterodera radicola*, but a white, worm-like grub with a black head, the larva of a gnat-like fly) really destroyed the living roots of bulbs, or that they were merely scavengers, eating up roots which had already decayed through the attacks of fungus or other causes. Many an argument have I had with a good Daffodil friend on this subject, he holding to the scavenger view, while I upheld the other theory. Then, some bulbs having been submitted to an expert, my opinions were for a time upset by him saying that the trouble was caused by a fungus and not by the eelworm.

However, only just lately I have quite satisfied myself by discovering the creatures actually at work in the living roots of a Daffodil. Not one



VIOLAS ARRANGED WITH YOUNG HAWTHORN SHOOTS FOR EXHIBITION, IN A PAN OF WET SILVER SAND.

only, but three or four were seen in the field of a small Coddington lens at one time, while the effects of their ravages were plainly observable in the tunnelled-out roots and frayed edges of the same. I have not the slightest doubt but what this pest is the principal cause of the failure of bulbs in pots, accounts of which constantly appear in your "Correspondence" columns and those of your contemporaries. I feel almost certain that these worms are not present in the dry bulbs, but are in the potting soil. My reason for this opinion is that one never finds bulbs attacked when grown in fibre, but only when grown in fibrous loam.

Sterilisation of the soil seems to be the only remedy, and when soil has been thus treated it should be done some months before it is used; in the meantime it should be turned several times, so that it may get well aerated. I have tried several soil sterilisers, both liquid and solid, but the eelworm seems to *thrive* on them all. It is curious to notice how "chancy" the growing of bulbs is in infested soil. For instance, at the present time I have a box of Daffodil Golden Spur as good as one could wish for, while another box of the same bulbs in the same soil has quite half the bulbs destroyed. Anyone who has constantly suffered from the attacks of eelworms can tell at a glance when the bulbs are affected, for, instead of the leaves growing freely away as they should, they make a feeble effort and then come to a standstill, and if the grower will take hold of the growth and give a firm pull, he will find the bulb come up without much resistance, the roots having been eaten away.

One may examine a great many bulbs before finding the worms at work, one reason being that, having done their fell work, they may have moved to fresh fields and pastures new, and another reason being that the wretches are rather lively in their movements, and unless the roots are examined immediately after the bulb is removed from the soil, they will have wriggled away under cover of soil or the old skin of the bulb.

Of course, eelworms are not the only cause of failure in bulb forcing, for some people can manage to spoil the best of bulbs even without their aid. Only quite lately my firm had some bulbs of Daffodil Golden Spur sent by post which only had one poor flower to six bulbs. On examining these it was found that every bulb had an embryo bud within, but the bulbs had evidently been submitted to too much heat and they had "gone blind," a disaster which will often happen when bulbs are given too high a temperature. Those who force large numbers of bulbs for the cut-flower trade find that only a few degrees will make the difference between success and failure. This is especially the case with Darwin Tulips. Mr. Leak of Messrs. Bath, Limited, who made such a grand exhibit of these Tulips in fibre last year, told me that it had taken him several years to find out the exact temperature to suit them.

It is unfortunate that when the average amateur has a failure with his bulbs, he immediately lays the blame on the bulbs themselves rather than on his methods of cultivation or the soil used in potting. The man of experience, on the other hand, looks to every other thing (soil, temperature, watering, &c.) before he thinks of condemning the bulbs.

Some years ago, when judging pots of Tulips at the Midland Daffodil Show for prizes offered by the late Mr. Robert Sydenham, I had a lesson I have never forgotten. There were some six entries for the prizes, and there one could see very good, indifferent, and very poor plants, all grown from the *same* bulbs supplied by *one* firm! I wonder if the growers learned the same lesson



IRIS 'CANTAB, A BEAUTIFUL CHANCE SEEDLING OF STRONG CONSTITUTION.

that I did, or whether the producers of the poor pots went away blaming our old friend "Uncle Robert" for sending them poor bulbs! I would say, in conclusion, that turfy loam contains far more insect-life, often including eelworm, than does ordinary garden soil; so it might be well for those who have had bad results from bulbs grown in turf to try their ordinary garden soil, to which might be added sand, leaf-mould, Cocoanut fibre, or anything in that line which would tend to keep it open and sweet. In fact, it would be better to rely upon fibre only than to use soil known to be infested with eelworm, unless it had been previously sterilised.

Lowdham, Notts.

J. DUNCAN PEARSON

A CHANCE SEEDLING IRIS.

IRIS CANTAB.

ON this page appears an illustration, almost life-size, of the new bulbous Iris which gained an award of merit at a recent meeting of the Royal Horticultural Society. This charming variety, which has pale blue standards and pale violet falls, with golden orange crests, originated as a chance seedling in Mr. E. A. Bowles' garden at Waltham Cross. It is probably derived from *I. Krelagei* or Max Leichtlin's *I. cyanea*, both of which were growing near to the place of origin. Although not unusual for Irises of the *reticulata* group to be weak in constitution, the new seedling, which, by the by, was shown by Mr. Herbert Chapman of Rye, grows very freely and multiplies rapidly, and for this reason it is likely to prove quite an acquisition for the open border. The flowers, which are borne about six inches from the ground, are fragrant, while they are far exceeded in height by the vigorous, deep green foliage.

THE CULTIVATION OF COB NUTS AND FILBERTS.

NUTS and wine! This phrase brings to mind a Georgian interior, mahogany tables reflecting the light from many candles, while the port, with due solemnity, makes its journey round the board. But, as times change, the Nut becomes divorced from vinous liquors and figures as the main course of a vegetarian meal, a scene of frugality contrasting strangely with the older picture. But whether we take our Nuts in the old or the new style, Cobs and Filberts have a special appeal to English tastes. When the demands of these Nuts as to soil are considered, it is rather remarkable that they are so little planted. They will grow in practically any soil, but in moist ground they are apt to make wood rather too freely, and it is upon dry and rocky soils that they flourish best. In Kent the limestone rock called "ragstone" offers an admirable

subsoil, and with the smallest of loam deposits on the surface the Cob grows to a remarkable age. Trees of 200 years can be seen planted 12 feet to 15 feet apart, and as they are tolerant of shade, Apples, Plums and other fruits are grown as standards between them. There must be many gardens where a dry, sloping bank or a neglected corner exists which could be made fruitful and pleasing to the eye by the planting of Nuts. The varieties now are many. A learned monograph in German lies before me which describes some eighty-seven kinds. The average gardener, however, will be content with rather less than this, and a good selection will be as follows.



GUNNERAS GROWING ON THE MARGIN OF A POOL IN AN ESSEX GARDEN.

The earliest to ripen is the Prolific Filbert. This old sort was found in a Norwich garden about 1840, and is remarkable by reason of its curiously frizzled husks. The Nuts are small but sweet and are produced in bunches, often as many as twelve being found in one cluster. The Kent Cob or Lambert Filbert, so called after its raiser, Mr. Lambert of Goudhurst, Kent, is not really a true Cob, but is the best all round Nut now grown.

The distinction between Cobs and Filberts is a very old one, and consists in the fact that in the Cob the Nut is not fully covered by the husk, while in the Filbert it is entirely so. The Kent "Cob" is therefore properly a Filbert. The old Kentish Filbert, which is considered by many to be the best flavoured of all Nuts, has now largely dropped out of cultivation on account of the greater fertility of more modern kinds. Some of the best Nuts are the seedlings raised by Mr. Webb of Calcot about thirty years ago, and one of them, Duke of Edinburgh, can be highly recommended for its excellent flavour. The Cosford is a most prolific variety, with a shell so thin that it may be cracked in the fingers (fairly strong fingers are required!), and Merveille de Bolwyller is probably the largest of all, a vigorous grower and of first-class flavour. The Purple-leaved Filbert is perhaps more often seen in the shrubbery than in the fruit garden, and its fruits are sometimes overlooked, as the husk and shell are of the same

the garden, giving with so little expenditure of time so satisfactory a return. E. A. BUNYARD.

ROCK AND WATER-SIDE GARDEN AT COPPED HALL.

COPPED HALL, Epping, was at one time a retreat of pleasure and privacy for the Abbots of Waltham. At the present time it is owned by E. J. Wythes, Esq., who cherishes not only the historical associations of Copped Hall and its surroundings, but also the immense trees and the rare beauty of the spacious flower garden and lawns, which are pleasantly designed and admirably maintained. Remnants of the ancient garden of the monks are to be seen in the grand old Yew avenue which was figured in our issue of February 14, while the old-time interest of the garden is enhanced by the presence of venerable trees of the Cedar of Lebanon and a remarkably fine specimen of the Deciduous Cypress, *Taxodium distichum*. The Yew avenue leads to a shady and sequestered dell, now converted into a rock garden of rare beauty and delight. Although the position is too shady for many flowers of the High Alps, which rejoice in all the light and air they may receive, yet there are many shade-loving plants which furnish this dell and make bright patches of colour at varying seasons,

purplish red colour as the leaves. As to the culture of these Nuts, there is hardly a more long-suffering plant in the fruit garden; but the trees will, nevertheless, repay occasional manuring, and wool waste, rabbit fur, or feathers are largely used for this purpose in commercial plantations in Kent.

In the Maidstone district a very restricted pruning is adopted, and a basin-shaped tree is preferred. The fruits on these trees are very large, naturally more so than those gathered from trees where less thinning is adopted, as in the north of Kent. The crops obtained from these trees are very variable, but are estimated at 7cwt. to 8cwt. per acre over a series of years, while in years when there is a shortage, such as the present, the price of the Nuts is often 1s. a pound or even more. Altogether there is no more useful plant to fill up odd corners of

while the neighbouring tree trunks are clothed with *Ampelopsis* and *Clematis* in variety. Though it was in the dull time of the year that our visit was made, the fine effects created by perennial Candytuft, *Cerastiums*, *Campanulas*, *Primulas*, the American Wood Lily (*Trillium*), dwarf perennial Asters, London Pride and *Aubrietias* may easily be conceived. A little stream flows through the rock garden, and is crossed by stepping-stones partly hidden by the River Mimulus, *Primulas* of the japonica type, *Saxifraga cordifolia* and Ferns in variety, of which the Hart's-tongue (*Scolopendrium vulgare*) and the Oak Fern (*Polypodium Dryopteris*), together with *Aspidiums* and the Royal Fern (*Osmunda regalis*), are used with charming effect; while growing by the stream-side are such hardy aquatics as *Butomus*, *Alisma*, *Caltha palustris* and *Typha angustifolia*. A beautiful collection of suitable shrubs, including *Cotoneasters* or *Rocksprays*, Japanese *Acers* in great variety, *Berberis stenophylla*, *B. Darwinii*, *Azaleas*, *Hypericums*, *Kerria japonica* and *Bamboos*, is planted with good effect in the background of the rock garden. Flowering shrubs form one of the most delightful features of this garden, and many of Wilson's introductions from China were noted, while rarely, if ever, is *Romneya Coulteri*, the Californian Tree Poppy, seen grown to greater perfection than against a wall in these gardens. In another part of the grounds is seen a large pool of water, which is being converted into a place of unusual splendour. *Gunnera manicata* looks magnificent planted on the margin of the pool, while later on the bank will be gay with the blooms of Japanese *Anemones* (pink and white), Siberian Irises, *Rodgersias*, golden-striped Rush, and *Kniphofias* or Torch Lilies. *Bamboos* and Weeping Willows are also planted to great advantage.

COLOURED PLATE. PLATE 1488.

THE COLUMBINES.

AQUILEGIAS have long inhabited our gardens, and in a Herbal which bears the date of 1564 Dr. Turner mentions *A. vulgaris*. This is the botanical name of the common Columbine, and single and double forms of various colours are found in abundance in gardens all over the country. Several very charming species were introduced into England in the first half of last century, and these beautiful *Ranunculads* are undoubtedly the forerunners of the exquisite strains of long-spurred hybrids found in commerce to-day. *Aquilegias* are somewhat widely distributed over the globe, and species have been introduced from the dry, rocky districts of North-West Himalaya, from Siberia, Europe, Canada, and from Guatemala.

Many of the species introduced into England have ceased to find a place in catalogues, and their place has doubtless been taken by the long-spurred hybrids. One of the best of the species was *A. leptoceras*, the Slender-horned Columbine, and under this name it was figured in the *Botanical Register*, 64. It is described in the Journal of the Horticultural Society as having flowers of a pale bright violet, with the tips of the sepals greenish, the short petals a clear bright straw colour. It is a native of Siberia beyond Lake Baical. *A. jucunda*, another native of Siberia, at one time known as the Joyous Columbine,

is rarely met with in gardens. It differs somewhat from *A. glandulosa*, having an altogether dwarfer habit and flowers of a much brighter blue, and in its very glaucous, round foliage. It is a much easier cultivated species than *A. glandulosa*, and a very pretty coloured plate of it appeared in the *Floricultural Cabinet* for May, 1857. In the same journal a coloured figure is also given of *A. kanacriensis*, a native of Cashmere, introduced to the Royal Botanic Gardens at Kew by Dr. Thomson. The flowers, about half the size of those of *A. jucunda*, are nearly similar in colour, and it is not met with, nor even listed, nowadays. It was also figured in the *Botanical Magazine*, 4,693. The *Floricultural Cabinet* for August, 1853, in a description of new or showy plants in bloom during that month at the Royal Gardens, Kew, mentions *A. sibirica* and *A. fragrans*. Both are said to be showy, the former having large, deep blue coloured flowers, and the latter having very large flowers with the outside blue and the interior white. They are seldom met with now. Many other species were in cultivation about that time, and one of the most notable was *A. alpina*. This is one of the gems among the *Aquilegias*, and the true form is exceedingly scarce now. It is offered in lists, but the true *A. alpina* is hard to obtain. It is a native of the European Alps, bearing immense, spreading blossoms of a charming shade of blue.

Coming to the species that are very probably the parents of the long-spurred hybrids, one of the loveliest is *A. glandulosa*. This beautiful native of Siberia has exquisite flowers of clear blue, with white below. It is a difficult sort to grow well.

During recent years a hybrid variety named *A. Helenæ* has been introduced, and it is said to resemble *A. glandulosa*. The writer has tried it, and discarded it as worthless. Undoubtedly the best of the hybrids from *A. glandulosa* that have received a name is *A. Stuartii*, raised by the late Dr. Stuart of Chirnside, the well-known *Viola* raiser, and distributed by Messrs. Cocker of Aberdeen. This hybrid, like its parent, is difficult to cultivate well; but we now have many unnamed hybrids in the long-spurred section that are quite as charming, and have the virtue of being easily grown. *A. chrysantha*, a tall, graceful plant with clear yellow, long-spurred flowers, has left its stamp almost indelibly upon the long-spurred hybrids of to-day, and is certainly one of the species from which they have originated. It is a native of New Mexico. *A. Skinneri*, at one time named *A. mexicana*, is another species to which we owe our modern varieties. This well-known *Columbine* has crimson red flowers tipped with orange, and the green mouth of the blossom is a conspicuous feature. *A. californica*, a pretty native of North America, is certainly another parent of the long-spurred hybrids. The spurs and petals of the flowers are a vivid orange red, and the mouths of the tubes deep yellow. Doubtless *A. Skinneri*, *A. californica*, *A. cærulea*, *A. chrysantha*, and in all probability either *A. glandulosa* or *A. Stuartii* are the species from which the long-spurred hybrids have been derived in conjunction with the many garden forms of *A. vulgaris*.

Quite a number of the leading seed firms have given a lot of attention in recent years to the development of the long-spurred *Aquilegias*, and the wonderful exhibits of them seen in the early summer at the Royal Horticultural Society's meetings are always a centre of interest. Efforts

have been made to get the more beautiful forms to breed true to colour from seed, but this has never been done quite successfully. As already indicated, the new race of long-spurred varieties is easily grown. It is advisable to sow seed as early as possible, in order to get strong plants for putting out in September. Some growers believe in sowing the seed as soon as it is ripe, just for the purpose of getting the plants as forward as possible. They succeed in almost any good garden soil, but to obtain large, fine flowers the beds ought to be deeply cultivated and well manured. Quite one of the finest plantations of *Aquilegias* we ever saw was at Messrs. Dobbie and Co.'s seed farm in Essex. A very large bed was planted out for seed ten years ago, and last summer it was flourishing amazingly; in fact, most of the flowers depicted in our coloured plate were obtained from that bed, and we are indebted to Messrs. Dobbie and Co. for sending the collection of flowers to our artist.

HARDY CHINESE PRIMULAS

(Continued from page 93.)

P. Cockburniana (Hemsl.).—This member of the *Candelabra* section was introduced in 1906 from Tatsienlu, Central Szechwan, by Messrs. James Veitch and Sons, and was collected by Mr. Wilson. Its brilliant orange scarlet flowers at once attracted the notice of the public. Unfortunately, it has not proved so satisfactory in cultivation as was desired, and many apparently have to cultivate it as a biennial. It is a free seeder, and its short life in gardens is therefore not of so much consequence. In some places it is quite perennial, but not always under the same conditions. It is naturally a lover of moisture, yet sometimes is perennial in dry, well-drained soil and even in clay. It has Primrose-like leaves and whorls of stalked flowers on scapes about a foot or more high.

P. Cockburniana Hybrids.—Crossed with *P. pulverulenta*, *P. Cockburniana* has produced some beautiful hybrids. *P. × Unique* is a handsome plant with coppery brown flowers. This, recrossed, has given *P. × Excelsior*, a deeper-coloured but less hardy plant than *Unique*.

P. × Lissadell Hybrid, which is the reverse cross to *Unique*, is a finer plant than *Unique*, and is hardier and more deeply coloured. On a damp soil I find these hardy and satisfactory. Cultivation: Good rich loamy soil in half sun.

P. cortusoides lichiangensis (G. Forrest).—This is now generally known as *P. lichiangensis* (G. Forrest). It is a good garden plant, easy to grow, even in the border, and quite a satisfactory subject. It resembles the valuable *P. Veitchii*, but is distinguished from that species by the foliage, which is not white beneath, being less hairy, and by the larger, more drooping flowers, which have also a larger eye. The anthers are yellow in *P. Veitchii*, but purple in *P. lichiangensis*. It was collected by Mr. Forrest in the Tali region, Yunnan, and introduced in 1908 by Messrs. Bees, Limited. Cultivation: Any good soil; easily grown in half shade.

P. deflexa (Duthie).—The plants of this section (*Muscaroides*) are generally of difficult cultivation in a wet climate, owing to the hairs on the leaves; but *P. deflexa* appears to be the easiest to grow. It has rather erect-growing leaves, covered with downy hairs, and close spikes of narrow, lilac purple or bluish flowers, which, like the others of the section, are curved in the calyx and corolla so as to assume a drooping form. It is exceedingly fragrant. *P. deflexa*, which comes from



STEPPING STONES IN THE ROCK GARDEN AT COPPED HALL.

Western China, was raised from seeds sent by Mr. Wilson. It flowered in 1906. Cultivation: Good garden soil with ample drainage; shady situation.

P. denticulata (Smith).—This, or an allied form, is described as from Mengtze in South-East Yunnan. As it is more general in the Himalayas, it will be referred to in my notes on the Himalayan Primulas. *P. pseudo-denticulata* (Pax) is earlier than the type from India.

P. Forrestii (Balf. fil.).—Introduced from the Tali region of Yunnan in 1908 by Messrs. Bees from seeds sent by their collector, Mr. Forrest. This distinct Primula has been found difficult to cultivate. It has massive stems, large masses of evergreen leaves, and yellow, sweet-scented flowers. It does not do well with me in the open, but in some places thrives on dry rock or in a retaining wall. It belongs to the section *Suffruticosa*, of which there are few representatives in cultivation.

P. Gagnepainii (Petitue).—This is synonymous with *P. heucherifolia* (Franch.) and resembles *cortusa Matthioli* in its general appearance. It is very hardy and easily grown. The drooping lilac purple flowers are carried on stems several inches high. This Primula was introduced under the name of *P. Gagnepainii* by Miss Willmott, who received seeds from Mr. Wilson. Section *Geranoides*. Cultivation: Will grow in any soil and in any situation.

P. Giraldiana (Pax) was introduced by Messrs. Bees in 1908 and sent out under the name of *P. muscaroides*. It belongs to the same section as *P. deflexa*, to which it has a strong resemblance; but on a minute comparison marked differences emerge. While *P. deflexa* is sweetly scented, *P. Giraldiana* is scentless. In the former the foliage is downy and the stems covered with white hairs; in the latter the leaves have fewer, though larger, hairs, and the stems are hairless. The very small bracts of *P. Giraldiana*, as well as its flowers, are purple. It was collected in Yunnan by Mr. Forrest. Cultivation: No doubt in some places this plant may prove perennial in the open, but with me it does not. I grow it in pots in a cold house in soil composed of two parts pulverised loam, one part leaf-soil, one part silver sand; in half shade.

JOHN MACWATT.
(To be continued.)

A RARE SAXIFRAGA (S. MEDIA).

THERE are certain members of the genus *Saxifraga* that are particularly difficult to cultivate. *Saxifraga florulenta* and *S. Grisebachii* are two species which readily occur to mind. In *S. media* we have another that is likely to give a good deal of trouble in order to cultivate it successfully. When not in flower, this species closely resembles *S. Grisebachii*, possessing a similar compact rosette of leaves. In flower, however, it is quite

distinct, for, instead of producing a spike, it sends up a raceme with spreading branches 2 inches long, as depicted in the illustration. It is imperative that this plant should not suffer from damp, and for that reason it is best grown like *S. Grisebachii*, either in pots or planted out on a small cone of stones.

ROSE-GROWING IN TOWN GARDENS.

CLIMBERS FOR WALLS AND FENCES.

THE Roses best suited for growing against walls include most of the Noisettes, Hybrid Tea and Tea

with whom it succeeds will be more than amply repaid for their care and trouble. A light, rich soil suits it best, and when well established it should be kept going with liberal supplies of manure. The blooms are of a delightful shade of glowing rose pink, and are among the earliest to open and the last to go. François Crousse also appears to prefer rather light soil, and needs a sunny wall to bring out the best of its colouring, which is a bright crimson. Large-flowered climbers of this shade are none too numerous, and are often asked for. Tea Rambler (coppery pink) is pretty and useful, and almost the only multiflora that is at home on a wall. With a westerly aspect Mme. Alfred Carrière,

William Allen Richardson (Noisette) and Reine Olga de Wurtemberg will do well. The latter is a semi-double Rose, crimson in colour, with fine foliage. William Allen Richardson, orange yellow in the bud, fading almost to white in the expanded blooms, is sufficiently well known to need no description. Walls facing east will suit Mme. Alfred Carrière, Climbing Mrs. W. J. Grant, Gloire de Dijon (Tea), Alister Stella Gray (Noisette), Climbing Caroline Testout (Hybrid Tea) and Conrad F. Meyer (rugosa). The last named is a fine, useful Rose of a silvery pink shade, especially desirable because it usually produces the first large, well-shaped bloom out of doors; but the plant is rather prone to mildew when placed against a wall. Alister Stella Gray, buff, with orange centre, is particularly good in the autumn. Very few Roses will do well on a wall facing north, and in town gardens, where other advantages are denied them, it seems rather like cruelty to plant them there. Félicité Perpétue, to which I referred in a previous article as a Rose for a bad spot, is a notable exception, and Bennett's Seedling may also be made to grow in such a position.

Points to Remember.—At the foot of a wall or fence the soil is much drier than in the open border, and consequently climbers so placed will need careful mulching and hoeing, especially when first planted. The difficulty in getting a plant to start satisfactorily may generally be traced to dryness at the root during the first season. In planting, all the roots should be

spread out in fan shape, and should all point away from the wall.

Pruning.—All climbers for walls should be cut down the first season, so that only the strongest rods are left longer than a foot, and none more than 3 feet above the ground. Afterwards it becomes a matter of thinning rather than pruning, but unripe and dead wood must always be cut away. When growths are overcrowded, thinning is best done in the autumn, the oldest shoots being selected for removal. Hybrid Tea and Tea Roses may be pruned back slightly, but Reine d'Or and other Noisettes should be left almost untouched.

P. L. GODDARD.



SAXIFRAGA MEDIA, A LITTLE-KNOWN SPECIES FROM THE PYRENEES.

Roses of climbing habit. For walls facing south, the Noisettes Reine d'Or and Mme. Alfred Carrière, the Hybrid Teas Climbing Mrs. W. J. Grant and François Crousse, and Tea Rambler (*Rosa multiflora scandens*) are among the best sorts for towns. Noisettes require to become well established before they will bloom satisfactorily, and little can be expected of them until the third year after planting. Reine d'Or is somewhat tender, and should be grown only in the most sheltered spots. Mme. Alfred Carrière, the best white climber, grows well, is sweetly scented, beautiful for decoration and quite hardy. Climbing Mrs. W. J. Grant is rather subject to mildew, but growers

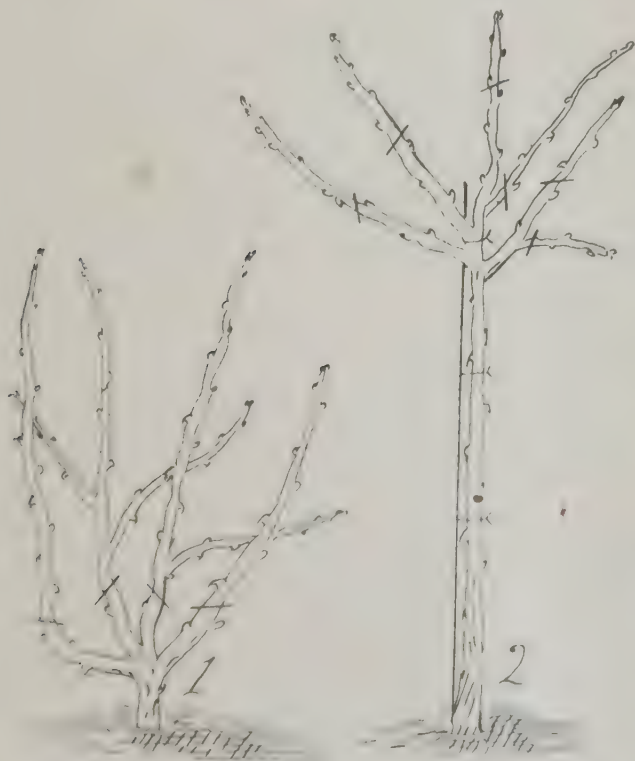
GARDENING FOR BEGINNERS.

ROSES FOR SMALL BEDS.

THE wild Bramble and the Dog Rose in the hedgerows look quite charming when growing in masses, really in an overcrowded state. The garden Rose crowded in small beds would not be as attractive, because it would present a very untidy appearance, the flowers would not be quite true to character, and the wood would not mature properly, so that the cultivator would meet with difficulties and much disappointment in future years. We must be content and wise enough to put in just as many Roses as the small bed will contain; then the plants will thrive.

There is often a certain amount of shade in a suburban garden. Well, many varieties of strong-growing Hybrid Perpetuals will do nicely in such positions, especially the dark red and deep pink ones, as the blooms do not fade so quickly as when the plants are grown in an open position fully exposed to the sun's rays. The strong-growing Hybrid Teas may also be planted in partial shade. That grand old favourite Gloire de Dijon does remarkably well there; the tints in the petals are much deeper and richer.

Ground may still be prepared and Roses planted. The soil must be deeply dug, the lower portion well broken up at the time, and the top left in a rough state. It is not necessary to put in any manure. The latter can be applied in the form of a mulch after the Roses are planted. Standards and dwarfs may be grown in the same bed—one standard in the centre of a small bed, and three in a larger one. Such beds are full of



HOW TO PRUNE DWARF AND STANDARD ROSES.

interest to the cultivator when there is no overcrowding. Fig. 1 shows how the cultivator must prune a strong-growing dwarf; and Fig. 2 a young standard.

It is too early to do the work yet, because, if the shoots are cut now, the buds that are left would quickly burst into growth. The young shoots formed would be very susceptible to injury

from cold winds and night frosts that are always experienced during March and the early part of April. If pruning is delayed for at least another three weeks, the lower buds will remain dormant, and in that condition will not be harmed by cold weather.

HARDY BORDER FLOWERS.

UNTIDY borders should not be tolerated in any garden. When one plant is allowed to grow into another, when old flower and leaf stems are left to decay on the plants, and when foreign matter is allowed to remain choking the young shoots of clumps of plants, the result is very unsatisfactory. The border is not attractive, and it actually makes the whole garden look untidy.

The new border must not be made by simply turning over the surface soil a few inches deep, and then putting in a few kinds of plants in a haphazard way. No; this will not do at all. The cultivator must trench the soil and do everything in a deliberate manner with the firm intention of having a really beautiful border, as it will go such a long way towards ensuring a beautiful garden. Then it will be advisable to plan the border for the plants, which should be mostly herbaceous. Some hardy annuals will be useful for filling up vacant places later on. The tallest-growing of the herbaceous plants must have positions near the back of the border, those of medium height in the centre, and the dwarf ones at the front. Before planting, make a rough plan of the border on paper, marking the positions so as to have harmony of colour and a regular succession of blossom from early in the summer till late in the autumn.

In the case of small borders, single specimens of many kinds of plants may be used; but where the border is broad and proportionate in length, clumps containing three, five, or seven plants would have the best effect. A good background forms a suitable setting for such border plants. Where there is no neat shrubbery, a row or clumps of Sweet Peas would do nicely. Hedges, neatly kept, will do. Wooden fences should be clothed with suitable climbing plants. On a low fence, quick-growing climbers, planted 6 feet apart, would do well and soon cover it.

In most mixed borders groups of spring-flowering bulbs, such as Daffodils, Tulips and Crocuses, are planted near the front, and these add considerably to the charm of the borders during the early months of the year. Unfortunately, when their flowers have departed, there is a more or less obvious gap, and this is where annual flowers are particularly useful. If seeds of such hardy kinds as Mignonette, Sweet Alyssum, Virginian Stock, Godetia, Clarkia, pot Marigold, Swan River Daisy, pink Mallow and Candytuft are sown between the bulbs at the end of March or early in April, the seedlings will be well advanced by the time the foliage of the bulbs is dead, and in the late summer and autumn will give a glorious display of flowers. If half-hardy kinds, such as Asters, Stocks, Nemesis and Zinnias are preferred, these can be raised in a cool frame or greenhouse and planted out between the bulbs about the third week in May. One of the chief values of annuals is their suitability for filling

temporary gaps during the summer and autumn months, and beginners would do well to utilise them more for this purpose.

CHARMING CLIMBERS.

IN nearly every garden climbing plants can be used to very great advantage. A few arches are soon erected; the more rustic-looking the better. Rough posts, too, will be found useful; and in the largest gardens, or in any affording the necessary space, pergolas would look very attractive. Avoid the erection of structures that are too light to withstand strong winds. The bare structure may, at first, stand all right; but when it is clothed with branches and leaves a greater strain is imposed, and it may be quickly destroyed, also the plants on it. Therefore be sure that the wood used is of sufficient strength.

A pergola must be erected over a straight path, arches too may go there; but the latter look well at the junction of paths and at almost any other point. Beside garden paths, dotted here and there, posts covered with climbers have a charming appearance. Below is shown a quite plain arch spanning the garden walk. It is well to fix the upright posts a few inches away from the edges of the paths to allow room for the branches of the climbers.

Of course, we cannot exclude the lovely climbing Roses. Then there are the fragrant Honey-suckles, the noble Wistarias, suitable for the long



ARCH SPANNING GARDEN PATH.

pergolas, also the Vines, which possess such richly coloured leaves. Clematises are charming. Ceanothuses clothe posts beautifully, and, if novelties are desired, put in a few plants of Wilson Junior Blackberry and Japanese Wineberries. Both kinds fruit freely and form a contrast in the colour of the berries, and both will thrive in gardens near towns.

G. G.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Fruit-Houses.

Early Permanent Vines.—If all has gone well with December-started Vines, the bunches should now be ready for thinning, and this should be done with great care. Carefully avoid touching the bunches with the hand, and do not thin too hard at first. Stop the shoots at the second or third leaf beyond the bunch, and gradually work them down to the wires a little at a time. Damp the floor and vacant parts of the bed twice daily, but avoid steam. The temperature may be 70° at night, rising to 85° by day with sun-heat.

Strawberries.—The early batch of plants will now have set their fruits, and should be placed near the glass in a warm forcing-house. Syringe the foliage twice daily, and give frequent waterings with weak liquid manure. A shelf at the back of a Melon or Cucumber house will suit them well. Continue to introduce plants to gentle heat as required.

The Plant-Houses.

Gloriosa superba.—The roots, having been dormant for some time, should now be potted up and placed in comfortable quarters. Loam and peat in equal parts, with a good quantity of rough silver sand, will suit them. Cover the roots about two inches, and if the soil is in good condition very little water will be necessary until growth shows through the surface of the soil, but the atmosphere should be kept moist.

Roses.—Plants in pots which were started early will now be growing freely and showing their flowers. At this stage they may be given light dressings of guano, which is one of the most reliable manures for this purpose. Overhead syringing should be discontinued, or mildew may prove troublesome. Ventilate carefully at the top of the house, and fumigate if green or black fly should make its appearance. Permanent Rose plants in cool houses will now require liberal supplies of liquid manure at the roots. Avoid cold draughts.

The Flower Garden.

Violas.—If these plants have been wintered in cold pits, the lights may be removed whenever the weather is favourable, so that the plants may be grown as stocky and short-jointed as possible. Stir the soil between the plants, and remove all small weeds.

Calceolarias.—The tops may now be pinched, and the young plants should either be potted up or transplanted in a cold pit in order to prevent them becoming drawn.

Herbaceous Phloxes.—To grow these to perfection it is necessary to trench the soil to a depth of 2 feet, and give a good dressing of decayed manure. The position should be somewhat sheltered from the sun during the warmest part of the day, or the colour of many of the best varieties will be impaired. In lifting and preparing the roots for planting, pull them to pieces with the hand, and plant pieces capable of producing three or four spikes each; by this means better flowers will be produced than if larger clumps are used. Allow 2 feet between the plants, and if hot, dry weather sets in, mulch the bed with decayed manure and give plenty of water at the roots.

Climbers on Walls should be pruned and regulated without delay. No hard-and-fast rule can be laid down as to the manner in which the different climbing plants should be pruned and trained. The position in which they are growing has a great deal to do with this; but in all cases overcrowding must be avoided.

Roses of the Rambler type should be carefully thinned out, removing as much of the old wood as can be spared and tying in the strong, young growths of last season's production. These Roses are not adapted for walls; but for pergolas or pillars where the air can pass freely among them they are well suited.

Hardy Fruit.

Mulberries, Medlars and Nuts.—The branches of these should now be carefully thinned so that light and air may pass freely among them. Remove all suckers from the base of Nut trees; but the

pruning of these may be delayed until the catkins are formed.

Pruning Young Trees.—The pruning of young trees is an important matter, and should be performed with great care, as the future of a tree largely depends on the way this work is performed during the early stages of its growth. The branches of a perfect tree should be furnished with fruiting spurs from top to base, and should be sufficiently thin for the sun to reach the centre. To attain this end, trees which were planted a year ago should be carefully thinned, leaving only sufficient branches coming directly from the stem, and these should now be shortened back according to their strength, and to a bud inclining outwards.

The Kitchen Garden.

Lettuce.—Young plants raised from seed in January should now be ready for planting in cold frames. The soil for this purpose must be light and rich, and within 18 inches of the glass. Allow a space of 6 inches between the plants each way, and when sufficiently advanced half the crop may be cut for immediate use, leaving every second plant to develop. Autumn-sown Lettuce should now be planted on a warm south border. Slugs will be their greatest enemy, but may be kept in check by frequent dustings of lime in the early morning.

Peas.—The early sown Peas will now require protection from rough wind. A few Spruce boughs should be placed along the rows for a few weeks. Let the stakes be placed in position as soon as possible. The early sowings in pots should be freely ventilated in a cold pit. Keep the plants near the glass, and do all that is possible to keep them stocky.

Potatoes.—These may now be planted on a warm south border, where protection from frost can be applied if necessary. The sets of second-early and maincrop varieties should be laid out thinly in a cool shed in order to promote the growth of sturdy shoots. A change of seed is advisable, especially if obtained from Ireland or Scotland.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

The Hot-Bed.—For obvious reasons the raising of seed and the production of a few early vegetables must have the protection of a hot-bed. If this has not been done, no time should be lost in getting together the necessary quantity of manure. This should be turned several times to prevent it becoming heated, and if it becomes too dry, a little water may be sprinkled over it from time to time. During the final turning add a quantity of dry leaves, which, I think, help to maintain a steadier heat. For growing vegetables, about a foot of soil will be ample.

Brassicas.—Most members of the Brassica family may now be sown out of doors. But it will not be wise to sow all the seed at once, especially in the case of Cauliflower, Cabbage and Brussels Sprouts. At the very least two sowings should be made. At the outset it will be wise to place a double net over the seed about two feet from the ground. This will not only act as a protection against birds, but I find it also acts as a protection for the young plants towards the end of the month.

Leeks.—The main crop of Leeks may now be sown out of doors. Many make this sowing in cold frames, but I do not think this is at all necessary. My experience is that they do equally well on a warm border. It is, however, essential that the seed should be sown thinly; otherwise one never gets sturdy plants for transplanting.

Carrots.—A small sowing of Early Horn Carrots may now be made on a south border. It will not be wise, however, to put in more than a few rows, because if these are not used in a young state they will most certainly run to seed.

Celery.—Those who did not make a sowing last month may now put in a little seed of one of the dwarf varieties. In the majority of cases this sowing will be quite early enough. As previously advised, see that the young plants do not receive a check, either through lack of moisture at the roots or extreme fluctuations in the temperature.

Cucumbers.—For those who grow Cucumbers in cold frames, seeds may be sown any time during the coming week. They should be sown in small pots. In cold districts it is good policy to pot them on, at least into 6-inch pots. By the time they are established in these pots they may be safely transferred to the frames. They will, of course, need a little protection on cold nights, and in the earlier stages of growth little or no air should be admitted.

The Flower Garden.

Larkspur.—This lovely annual is becoming more popular each season, and little wonder, as, apart from its attractiveness as a bedding plant, it is especially effective for decorative purposes indoors. It has, however, a nasty habit of going off mysteriously, even up to the time of flowering. To get over this, many gardeners treat it as a hardy annual, and sow it where it is to remain. Personally, I have always treated it as half-hardy, and, with the exception of a few odd plants going off, have been able to make a wonderfully effective display with it. I usually give the ground a good dressing of lime before planting. Sow the seeds now and bring them on gently, as coddling in any shape would only be courting failure. When large enough, prick out the seedlings into frames and plant out about the beginning of May. I find they do best if planted in a border by themselves, or at least in large patches in a mixed border.

Mignonette.—This is such a common plant and its requirements so well known that one need say very little about it. Yet one hears numerous complaints about its fickleness, and many times I have been asked if I could account for its failure to germinate. Some years ago I saw a long border sown entirely with Mignonette and only a few plants appeared, whereas the following season almost every seed grew, which would suggest that there was something wrong with the preparation of the seed-bed. Before sowing see that the ground is made very firm (this I consider essential), and thin out the plants when quite small. If this is not attended to, the plants will last only a short time in bloom.

Pillar Roses.—No time should be lost in completing the work of tying up pillar Roses and other climbing plants, as after this date much damage may be done to the young shoots, which will now be very prominent.

Plants Under Glass.

Hydrangeas.—These indispensable greenhouse plants can be had in bloom over a very long period of the year. Cuttings may be rooted now, and again in the autumn. Those struck now will produce immense heads by September, while those rooted in the autumn will flower the following spring and summer. Older plants may now be brought from their winter quarters and pruned. They will be found to make fine specimens for the conservatory.

Salvia splendens.—Old plants of this useful winter-flowering Salvia should now be looked over, partly cut back, and placed in a warm vinery to produce cuttings. Like all other Salvias, this variety is a rapid grower, and cuttings put in at the end of this month will make handsome plants towards the end of September.

The Hardy Fruit Garden.

Strawberries.—Where planting was not done in the autumn, the present will be a suitable time to get this done, although it will not be wise to delay this work much longer. Those planted now should have the flowers pinched off as they appear, which will assist the plant to build up the crown for fruiting the following season.

Planting and Pruning.—The planting and pruning of all hardy fruit, which, through various causes, could not be done earlier, should now be completed.

Fruits Under Glass.

Melons.—This is a crop that must be regulated according to requirements. At this season Melons will take fourteen to fifteen weeks from the sowing of the seed until the fruit is ripe. Midsummer crops will take twelve to thirteen weeks. It will always be wise to allow a little longer in each case, as one never gets good flavour unless the house is well ventilated as the fruits approach the ripening stage.

JOHN HIGHGATE.
(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE USE OF LIME IN THE GARDEN.

LIME is present to a greater or less extent in all soils excepting peat and the poorer sands. Its presence is essential to the maintenance of fertility, as it has many important duties to perform, both in the soil and in the body of the plant itself. Yet, strictly speaking, it is not a food—that is, it is not actually required in the intimate chemical structure of the living parts of the plant. Nevertheless, it contributes more than anything else to the proper nutrition and general health of our crops. So far as its beneficial actions in the soil are concerned, in the first place its presence improves the physical or mechanical condition of both light and heavy soils. It binds sands and improves the texture of stiff clays. The great fault of a clay is its extreme closeness of texture; the individual grains are so minute and they are packed so closely together that little space is left for air or for the downward movement of water. The presence of lime causes these grains to coagulate into little groups or masses, and so opens the soil and thus materially improves its texture. Certain obvious results follow: The movement of water through the soil is rendered easier and more rapid, the soil dries quicker in the spring, and this favours earlier warmth and, as a result, earlier crops. The consolidation following the application of lime to light soils increases their water-holding power, an important factor during a dry growing season.

In the second place, lime exercises important chemical activities in the soil. It is a well-known fact that lime readily neutralises acids. Lime-water added to sour milk will correct its acidity, and chalk added to vinegar will act in the same way and produce the same kind of result. Similarly, quicklime or ground limestone mixed with a sour soil will neutralise its acidity and render it sweet and wholesome to the roots. The application of lime in some form or other is the only practical method open to a gardener to correct sourness in the soil. An acid soil is very distasteful to the roots of the majority of cultivated crops, and, furthermore, it interferes with the activities of useful soil bacteria. On the other hand, such root diseases as club-root are encouraged by acidity of the soil. The particular form of fungus that induces this disease can only thrive and multiply in a soil which is acid in its reaction; therefore a generous application of lime to such a soil is the only real practical method of combating this troublesome form of disease. It is because of this peculiarity that cruciferous crops on calcareous soils are never affected with club-root. In this connection it ought to be remembered that the use of certain artificial manures—superphosphate of lime and sulphate of ammonia especially—tends to destroy the carbonate of lime present in the soil, and thus by their continued use bring about an undesirable acidity unless corrected by the occasional application of fresh supplies of lime. It is not only in connection with the question of acidity that the chemical activities of lime favour the gardener's work. Lime has a direct influence upon the liberation of plant food that otherwise might remain locked up in an insoluble state. This is especially true with respect to phosphorus and potash, two of the three most valuable constituents of the food of garden crops. By the action of

lime the insoluble salts of these essential elements are gradually brought into solution in soil water.

It is, however, in its third relationship that lime exercises such a potent influence upon the fertility of a soil, namely, in its relation to the biological activities of the soil. Apart from the direct application of such "artificial" nitrogenous manure as nitrate of soda, all the nitrogenous food of crops is prepared for the roots through the agency of living bacteria. The chief source of supply is the organic matter or humus present in all garden soils. Dead roots, fallen leaves, ordinary stable manure, &c., all contribute to the soil's store of humus. But before any such material can be utilised as food by crops, it must be broken down or fermented by vast hordes of putrefactive or decay bacteria. The most important end product of decay is ammonia, because it contains the valuable nitrogen in its chemical molecule. But relatively few plants appear to be able to make use of an ammonium salt; a further transformation, therefore, must take place before it is available. It is at this point that lime becomes so essential a constituent of the soil. All well-drained, cultivated soils support a vast population of bacteria concerned in nitrifying ammonia. In point of fact, there are two definite and distinct races, one engaged in oxidising ammonia into nitrous acid, and the other continuing the work by oxidising the nitrous into nitric acid. The function of the lime is to neutralise the acid immediately it is formed, so that nitrate of lime accumulates as a direct result. This nitrate of lime is the chief source of the nitrogenous food of all garden plants. The progress of nitrification thus depends upon a sufficiency of lime being present in the soil. It follows, therefore, that, if the supply runs out, the nitrification stops, as the nitrifying bacteria are checked in their growth if the acid products of their activity are not immediately neutralised. Nitrification is at its best when the soil is fairly moist and warm, when it is well aerated, and when it contains a sufficiency of lime. The absence of any one of these factors will check nitrification.

The particular point I am anxious to drive home in this connection is this: That the presence of lime in the soil encourages the activities of all those races of soil bacteria that are concerned in the preparation of nitrogenous food for cultivated crops. I am convinced that there are a large number of gardens the soils of which are heavily charged with rich stores of humus, but which, owing to the lack of lime, are unable to unload their treasures. In such cases it is lime, not additional manure, that is urgently required. The soil is fat, sluggish and inert, whereas it ought to be alive, buoyant and active, having its food reserves rapidly transformed into nitrates for the nutrition of our crops. Lime, therefore, is the most active agent in the transport service of the plant. It carries valuable food up to the absorbing root-hairs; but, comparatively speaking, it rarely enters the plant itself. Supposing it presents itself in the form of a nitrate. In the act of absorption the nitrate is decomposed, the nitric acid is absorbed by the living root, while the lime is left behind. The now freed lime instantly makes a fresh combination with the carbonic acid given off by the breathing root, and thus again in the form of a carbonate it is ready to repeat its part in the work of nitrogen transportation. A certain percentage of lime, however, enters the plant, as it is needful in the performance of certain duties in the living tissues

of the plant. One such duty only need here be mentioned. During the process of growth certain acids are formed, which, if allowed to accumulate, would interfere with the health of the tissues. These acids are neutralised by lime and thrown out of solution in the sap in the form of crystals. Some plants are able to excrete their excess of lime. This is well demonstrated in the case of "crustaceous" Saxifrages, where the white incrustations that appear along the margins of the leaves represent compounds of lime carried out in exuditions of sap which, on evaporation, leave the solid lime salts behind.

As is well known, certain plants dislike lime, and their spontaneous appearance in a soil indicate the absence of lime in that soil. The common Dock Sorrel (*Rumex acetosella*), the Foxglove and *Erica cinerea* are examples of such plants, and gardeners are familiar with many others which under cultivation must be kept free from lime; but these cases do not in any way affect the general question. It is worth noting, however, that Principal Wright found by direct experiment in the West of Scotland that the application of lime to the soil had a distinctly bad effect upon the yield of Potatoes, and he recommends that Potatoes should not be planted in ground recently treated with lime.

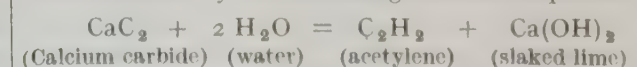
D. HOUSTON.

Royal College of Science for Ireland.

ACETYLENE GAS GENERATOR REFUSE

FOR GARDEN CROPS.

DURING the last few weeks a great many readers have written for information respecting the use of acetylene gas refuse, and we therefore reprint the following, which appeared in *THE GARDEN* for March, 1909. "The question of the usefulness or otherwise in gardens of the refuse from the acetylene generator plants is very frequently raised. 'May this refuse be placed upon the land without injury to crops and with beneficial effect upon the soil?' is mostly asked. Calcium carbide is made by causing lime and carbon to combine together in an electric furnace, so that a compound having the chemical formula CaC_2 is formed. When water is brought into contact with this substance, certain chemical reactions immediately take place, with the result that acetylene gas is generated and a white substance remains mixed and partly dissolved in water. This is shown by the following chemical equation:



The white substance is slaked lime, and if it were not for the presence of some impurities, derived mostly from the form of carbon used in the manufacture of the carbide (that have, of course, been ignored in the equation), this slaked lime would not differ in the least from that obtained when fresh burnt lime is slaked with water.

"On account of the presence of some impurities in the carbide, however, the refuse is likely to contain certain compounds of sulphur and lime (sulphides), and occasionally some phosphide of lime, a compound of phosphorus and lime. Both of these compounds are injurious to plant-life, but the latter is not likely to be present in sufficient quantities to do any appreciable damage, and the former soon alter in composition in the soil and become innocuous. Thus the refuse may be used with advantage upon soils,

though it should first be exposed to the action of the air for a time before it is allowed to come in contact with roots. It may be spread on the soil in the autumn at the rate of about half a bushel to the square rod, as evenly as possible, and allowed to lie for a time before it is forked in. Used in this way it will have the same beneficial effects upon the soil as a dressing of slaked lime applied in the same way, counteracting sourness of the soil and mitigating the evils arising therefrom, and, in the case of clay soils, causing the minute particles of clay to coagulate and therefore making the pores in the soil larger and the soil itself easier to work, more open to the air and, as a result, more easily warmed by the sun in the spring. SCIENTIST."

IS THE DAFFODIL A FLORIST'S FLOWER?

IN his interesting discussion as to whether the Daffodil ought or ought not to be considered a "florist's flower" (THE GARDEN of January 31 and February 7), Mr. Jacob asks me a number of questions which, with your permission, I shall do my best to answer. Why was Mr. Jacob asked to judge the Daffodils at Barnstaple, and not Tom, Dick or Harry? This question is so easy as to be almost difficult. Why, because Mr. Jacob is Mr. Jacob, and not any random individual you may chance to pick up. Tom, Dick and Harry may be estimable persons in their way, and may even know a Daffodil from a Dandelion when they see it. I have nothing against Tom, Dick or Harry, except that none of the three happens to be Mr. Jacob, and that, when I have Daffodils to show, I prefer to submit them to someone whose knowledge of the flower is above suspicion; someone who has seen all that there is to see in the way of Daffodils, who has grown them and shown them (peradventure even measured them with a foot rule) and who has written about them with enthusiasm and distinction. Mr. Jacob happens to fill the bill.

Again: Should I prefer the head-gardener of the nearest big place to judge my Daffodils to, say, Mr. P. D. Williams? I hesitate to say that there is any judge in the wide world I should prefer to Mr. P. D. Williams; but as concerns the head-gardener in question, I should have to know more about him before I suggested that he was not "the man for Galway." I suppose, as a rule, head-gardeners have so many claims on their attention as hardly to allow of their becoming specialists in a particular flower. My acquaintance with head-gardeners is not extensive, but I know (or knew) of one at least to whose judgment I should not hesitate to submit my Daffodils.

The broadside of queries with which Mr. Jacob opens the second instalment of his article I can best answer by conceding the necessity for shows, which I do very readily; also the necessity for recognising "points," if by "points" Mr. Jacob means certain desirable qualities which we all recognise when we see them. But such points must be manifestly desirable, and not arbitrarily selected by a junta of florists merely because the qualities in question are difficult to secure. If judges bar certain colours, combinations of colours, rays, stripes, pencillings, blotches and what not, it must be because these are thought to be intrinsically ugly and undesirable, and not because they run counter to certain florist conventions.

Why, for instance, may the edge of a Carnation petal not be fringed? A fringed petal is a charming feature in a Begonia, Pink or Poppy. But the florist rules it out as improper in the Carnation. Again, why, to have a chance with the judge, must an Auricula have a thrum eye? There is nothing disgraceful or inherently ugly in a pin eye. It is a thing of Nature's designing for a special purpose of her own; and, in my experience of the Primula tribe, she perpetrates a pin eye quite as often as she achieves a thrum. I myself do not admire pin eyes; but that is because I have been badly brought up (am, in fact, a florist in disguise), and proves nothing. I daresay there are people who prefer the pin eye to the thrum, and, if so, how must these inoffensive amateurs wince at the indignity put upon their taste by the florist! Coming back, then, to the Daffodil, there are accidental features of the flower which please one and displease another. We may prefer a red eye, or an eye of another colour; a perianth segment like the ace of spades or one of another shape; a flower that looks up or a flower that looks down, or a flower that looks straight ahead. These are unessential points on which the best judges may agree to differ. On the other hand, there are certain things we all desire in the flower—size, substance, purity and delicacy (or depth) of colour, massiveness, symmetry, proportion, and so on, to all of which qualities a competent judge will surely give their full value, without any Glenly at his elbow.

Finally, may I be permitted to suggest to Mr. Jacob the reason why he is so equally divided between "Yes" and "No"? It is, I think, because he has not determined for himself what exactly he means by the word "florist." Sometimes he has in his mind the florist of the old school, now almost, if not quite, extinct, who tolerated only one or two types of a flower (the Tulip, for instance), and judged them by rigorous and sometimes by arbitrary standards. Sometimes the "florist" of Mr. Jacob's vocabulary means exhibitor, sometimes hybridiser, and sometimes little more than the skilful grower. I myself am a florist because I prefer maximus to Santa Maria; Mr. Farrer is a florist because he approves of hybrid Saxifrages; John Heal was a florist because he created a new race of Begonias. No doubt, in various senses such as these we are all florists. But how many of us are florists in the sense in which Glenly was a florist? However, when all is said, I am glad to believe that any differences between Mr. Jacob and myself are of the purely academic kind. As regards the essential points of Daffodils and Daffodil culture, I do not remember any on which I do not agree with your distinguished contributor. Let him not even think that I undervalue the Spanish loveliness of Santa Maria. But, then, she is so "uncertain, coy, and hard to please"!

SOMERSET.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment is desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

PLANTS FOR A SMALL POOL (H. S. H.).—There is no reason why you should not do as you suggest with your Lily pond by introducing soil among the stones. Here and there the soil should be brought within from 3 inches to 6 inches of the surface of the water to accommodate such plants as succeed best where the water is shallow. In the deeper water you may plant the Flowering Rush (*Butomus umbellatus*), double-flowered Arrowhead (*Sagittaria variabilis* flore pleno), variegated Myrtle Grass (*Acorus Calamus* variegatus), narrow-leaved Reed Mace (*Typha angustifolia*) and *Richardia africana*. Where the water is shallower, *Iris sibirica*, *I. laevigata*, *I. pseud-acorus*, *Caltha palustris* flore pleno, *C. polypetala*, *Calla palustris* and the Bog Bean (*Menyanthes trifoliata*) may be grown. The plants should be procured and planted as soon as possible.

WATER LILIES IN GARDEN PONDS (Colonel W.).—There is no reason why Water Lilies should not thrive excellently in your ponds. The best way to establish them would be to drain the water away and make mounds of good loamy soil, kept in position by whole turves and bricks, on which to plant the Water Lilies. As a rule, the top of such mounds should be from 1½ feet to 2 feet below the surface of the water; a few inches either way, however, makes little difference. Planting should take place at once; in fact, it is already rather late. The following are really good kinds: *Nymphaea gladstoneana*, white; *N. William Falconer*, red; *N. tuberosa flavescens*, yellow; *N. Marliacea carnea*, pink; *N. robinsoniana*, red; and *N. alba candidissima*, white. We suggest that this number will be sufficient for your requirements, as they soon form large plants.

THE GREENHOUSE.

LILY OF THE VALLEY FLOWERING WITHOUT LEAVES (J. P.).—The German-grown crowns of the Lily of the Valley that have been forced hard to get them in flower early will throw up their blossoms without showing any foliage. Owing to this, retarded crowns are usually employed for very early flowering, as they produce leaves as well as flowers. As the season advances, the German crowns will push up the leaves and flowers together.

FERNS FOR CONSERVATORY (E. S. L.).—Any of the following Ferns will suit your requirements: *Adiantum aethiopicum*, *A. Capillus-veneris*, *A. decorum*, *Asplenium bulbiferum*, *A. Colensoi*, *Blechnum occidentale*, *Cyrtomium falcatum*, *Davallia canariense*, *Lastrea aristata* variegata, *Nephrodium molle corymbiferum*, *Onychium japonicum*, *Osmunda palustris*, *Polypodium aureum*, *Pteris cretica*, *P. c. albolineata*, *P. c. cristata*, *P. c. major*, *P. c. nobilis*, *P. internata*, *P. longifolia*, *P. l. Mariesii*, *P. nivalis*, *P. scaberula*, *P. serrulata*, *P. s. cristata*, *P. s. gracilis*, *P. Summersii*, *P. Wimsettii* and *Woodwardia orientalis*.

DIPLACUS GLUTINOSUS (Atherstone).—Generally speaking, *Diplacus glutinosus* should be given much the same treatment as a *Fuchsia*, except that it should not be kept so dry during the winter. It is best propagated by cuttings of the young growing shoots, taken in the spring when they are about a couple of inches in length, inserted into pots of sandy soil, and placed in a close propagating-case till rooted, which will not take long. A compost made up of loam, leaf-mould and sand will suit it well. As soon as your cuttings are rooted, they should be potted into small pots, giving them a warm situation in the greenhouse to encourage growth, and shifting them on into larger pots when required. They will flower well in pots from 6 inches to 8 inches in diameter.

TREES AND SHRUBS.

BUDDLEIA COLVILLEI (E. S. L.).—This is of rapid growth, but as a rule it flowers only when it has attained a fair size. As your plant is in such good condition, we should not advise you to prune it at all. It is altogether more tree-like in stature than *B. veitchiana*.

COTONEASTER FOR NAME AND TREATMENT (Japonica).—The specimen sent for identification is *Cotoneaster microphylla*, a native of the Himalaya. It may be propagated by seeds sown at once in sandy soil in a warm greenhouse or frame; or cuttings of young shoots, 3 inches to 4 inches long, may be taken in July and inserted in pots of sandy soil, or in a bed of sandy soil, in a close frame. A good compost for cuttings is made up of two parts loam, one part leaf-mould or peat, and one part silver sand. Make the compost moderately firm before inserting the cuttings.

HONEYSUCKLES NOT FLOWERING WELL (F. B. L.).—Your Honeysuckles are not likely to bloom any more satisfactorily if you cut them down and allow them to make new growth. As you say they are growing among Roses and Hops, we suggest that they are rather heavily shaded at times, and perhaps too crowded to allow of their obtaining a proper circulation of air among the branches. Roots of other plants may rob the Honeysuckles of food, and thus make them too weak to flower. As a rule, Honeysuckles succeed most satisfactorily when grown alone. We, however, advise you to leave them as they are for another year, and you may obtain flowers during the summer. It is difficult to advise correctly regarding the cause of non-flowering without seeing the plants and the exact conditions under which they are growing.

THE GARDEN.

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MARCH 7, 1914.

NOTES OF THE WEEK.

Early Daffodils at Wisley.—In the Royal Horticultural Society's Garden at Wisley may be seen at the present time colonies of the delightful *Narcissus cyclamineus* naturalised under trees and flowering to perfection. The dainty, rich yellow flowers, about six inches from the ground, spring up from a carpet of soft green moss in shady woods. This is one of the earliest Daffodils to flower, and is of great value for naturalising in woods or near the water's edge.

Planting Raspberries.—The present is a suitable time to make a new plantation of Raspberries. If possible, select a plot where they may be planted in rows running north and south. As a rule, no trouble should be found in getting sufficient suckers from existing plantations.

Our Spring Number.—Next week we shall publish a special enlarged spring number, containing many practical and interesting articles on seed sowing, the late planting of Roses, perennials, ornamental shrubs, and other plants. The illustrations will be of a unique character, and as there is sure to be a large demand for this issue, we advise readers to order copies well in advance.

An Attractive Winter-flowering Tree.—*Cornus Mas*, the Cornelian or Jew's Cherry, is one of the earliest of our flowering trees, with its clusters of yellow blooms, which are borne so freely on the trees at this season. As the trees get old they commence to bear fruits freely, and these are red and as handsome as a Cherry. In many places on the Continent selected varieties are grown for the sake of their fruits, which are excellent for preserving, and they might be grown more extensively in this country for that purpose. It is very effective, particularly where it is as a background of large conifers.

Crocus Sieberi.—This is one of the best known of the "species" Crocuses, and we imagine that everyone who goes in for these charming flowers includes this variety in their collection. It has been particularly good in many gardens this last February on account of the open weather. It is of such a short, sturdy habit that wind that could play havoc with the larger and taller *C. imperati* and *C. tommasinianus* has but little effect on *C. Sieberi*. We pen this note because

we believe that there are many gardens where this gem is as yet a stranger. This should not be so. It should be as widely distributed as the ubiquitous and universally loved fine old-fashioned Dutch Yellow, which Forbes Watson calls in his famous book, "Flowers and Gardens," "Most gladsome of the early flowers," and then goes on to say why it should never be taken up and divided. *C. Sieberi* is a small flower compared with this, but it has such a daintily shaped, goblet-like bloom of such a pleasing shade of deep but brightly hued mauve that it, too, will have admirers whose name will be legion when it is distributed in our gardens as its merits warrant.



NARCISSUS CYCLAMINEUS NOW FLOWERING IN THE WILD GARDEN AT WISLEY.

Pruning Street Trees.—This is the season when municipal and urban authorities usually turn their attention to the so-called pruning of the street trees in their respective districts, and, judging by past experience, a word of warning is very necessary. All too often we see these trees so hacked and mutilated as to render them cripples for life, and mere caricatures of what Nature intended them to be. In large cities, where the street trees are usually under the control of a practical and experienced man, the evil is not often perpetrated; it is in smaller towns, where the work is supervised by the town clerk or sanitary inspector, that the mutilation is rife.

That some curtailment of the branches is at times necessary we are fully aware, but this can be done without making the trees look like giant clothes props or mops. Perhaps some day urban or borough councils will realise that street trees are an asset to their respective towns, and secure and act upon practical advice concerning them.

Sparrows and Yellow Crocuses.—Just now we have a good many Dutch Crocuses of various colours in the garden, and, with the exception of the yellow varieties, these are unmolested by the sparrows. The yellow ones, however, have been plucked and torn to tatters with a vengeance that is almost fiendish. It would be interesting

to know whether this is the general experience of readers, and whether any reason for this selection of yellow varieties for destruction has been put forward. Hitherto the sparrows have left the yellow Crocuses alone in our garden, although, of course, we are well aware that others have not been so favoured.

Standard Plants for Summer Bedding.—Old plants of Fuchsia, Heliotrope, Plumbago, Abutilon and strong-growing Pelargoniums may be shaken out of the soil in which they have been wintered, and potted into a compost of turfy loam and leaf-soil with a good sprinkling of rough sand. Place the plants in a temperature of 55°, where they may be syringed twice daily. Seedling plants intended for this purpose may be kept growing in a temperature of 60° until the required height is reached, when the tops should be pinched out and the resulting shoots stopped again after a few leaves have been made.

Hyacinth Garibaldi.—Garibaldi is a Hyacinth of outstanding merit for early flowering in pots. It can easily be had in good condition in mid-January, or, with a little extra heat beyond a usual greenhouse temperature, earlier still. When the bells are expanding, it is something of the colour of General Pelissier, but as the bloom ages it develops a singularly effective shade of rich, glossy crimson and the petals become gracefully recurved, showing a pleasing contrast between their interior and exterior, as by this time the outsides have become flushed with quite an orange tone, which is very pronounced in a good light.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Lady Hermione as a Border Carnation.

Please allow me to take exception to the statement by Mr. Brotherston on page 96, issue February 21, about the above Carnation, "that it can be kept in health *only* by pot culture." We grow this variety out in the border, among others, right through the season, and at the time of writing no variety could be looking more healthy and vigorous, the leaves having that desirable gloss and Malmaison-like curl so noticeable with this particular sort. This testimony will be strengthened by adding that Highgate is considered a cold district, and the subsoil is solid clay not more than 2 feet below the plants. The foregoing applies to one year and two year old plants, the layers being wintered in pots or boxes in a cold frame. Last year Lady Hermione was in every way most satisfactory with us.—C. TURNER, 3, Kenwood Road, Highgate, N.

I doubt if anybody could tell one from the other. At the last Royal Horticultural Society's show it was noticeable that a great number of Gloria and major were exhibited with only one or two flowers on each. Naturally, they were larger than on plants more profusely flowered. I offer no opinion whether the plants with only one or two flowers had been disbudded, but we all know what the result is when Roses bear only a few blooms for exhibition purposes.—ALPINIST.

Peat Moss Litter Manure.—The remarks in THE GARDEN of February 21 and February 28 respecting the value of peat moss litter as manure are interesting, and I am pleased to see the opinion of distinguished men upon it, also that many have had better results from its use than I have had. Last season, owing to the scarcity of farmyard manure here, we used peat moss litter which had come from the stables and had been given time to decompose. Our soil is a light, porous loam, resting upon a well-drained gravel subsoil. Alternate years I endeavour to work our soil 2 feet deep, using straw manure between the

Vegetable Marrows and Broad Beans we lost in the same way as the Peas. For satisfaction I forwarded samples of the affected plants and the peat manure, as used, for investigation to a scientific expert at a research laboratory, who endorsed the view I had—that the mischief was due to the presence of mite, which he freely found in the manure and plants sent.—H. FRENCH, *Forthampton Court Gardens, Tewkesbury.*

— Moss litter has been used with farmyard manure to prevent the wastage of ammonia; it seems to fix this element and conserves moisture well. Therefore it is beneficial, when used with farmyard manure, on light soils, but on soils of a heavy nature it would tend to increase the acidity.—JAMES CARTER AND CO., *Raynes Park.*

Lenten Roses as Cut Flowers.—I have read the article on Lenten Roses in your issue for February 21, page 95. As regards the cut flowers, we have lately tried the plan of hammering the stalks gently, so as to split them without breaking them too much, and find that the flowers remain quite fresh for some time. This is also the case with Maidenhair Fern, the fronds remaining quite fresh, sometimes for as long as ten days.—M. M. CAMPBELL.

A Fine Plant of Garrya elliptica.

Few evergreen shrubs are more attractive than *Garrya elliptica*. This handsome Californian plant, with its long, tessellated catkins, of a peculiar yellowish green, measuring from 8 inches to 10 inches, forms a very striking appearance against the dark green, coriaceous foliage, which somewhat resembles the Evergreen Oak. Although generally grown against a wall, it is more ornamental in the open, where a plant 11 feet high and 32 feet through, as shown in the illustration, growing on a lawn, is a very attractive feature during this time of the year. The plant is dioecious, the male being the more handsome; the female plant is seldom seen in gardens. It succeeds best in rich, loamy soil, and is readily raised from seed, by cuttings, or layers. If any pruning is required to keep it in shape, it should be done directly after flowering.

The plant illustrated is growing in the Botanic Garden, Cambridge.—F. G. PRESTON.

Miniature Hyacinths.—Many of my friends in Holland are, I know, readers of THE GARDEN. I would like to ask them, more especially those who make a speciality of Hyacinth culture, if they could not unearth a few more kinds like Orange Boven, which I saw was mentioned not long since in "Notes of the Week"? This is one of the varieties that look well in its miniature form. It is then a true counterpart of the Roman Hyacinth, which I consider the ideal type for true "miniatures." Thin, tall, stiff stems, with medium-sized, well-shaped bells, lightly and somewhat sparsely arranged upon the spike, constitutes my idea of perfection. Very many of those now sold as miniatures depart too far from this standard to be really pleasing. It looks as if growers have put young three year old bulbs on the market without ever considering the appropriateness of the variety to be grown in this way. A yellow variety that I once had under the name of Fleur d'Or was just such another as Orange Boven.—JOSEPH JACOB



A REMARKABLE PLANT OF GARRYA ELLIPTICA IN THE BOTANIC GARDEN, CAMBRIDGE.

Saxifraga burseriana.—Mr. Raymond Negus, whose note appeared on page 90, February 21 issue, is to be congratulated on his success in growing this very interesting plant, and I am glad to have the opportunity of supporting his method of cultivation by personal experience. Until last year I grew *S. burseriana* and its allies in shade; but since trying them in full sun my plants have increased in size and have flowered more freely. Mr. Negus may well feel proud of his plants with thirty flower-spikes on each, but it is to be hoped that he saw Mr. Frank Lloyd's plant at Vincent Square on the 24th ult. This plant, it was stated, bore over three hundred flowers, and although I did not count them, the dense mass of bloom gave strength to this statement. It would be interesting to hear from the grower how this result was obtained. From personal observation of my plants, I have come to the conclusion that there is practically no difference discernible between the type and the varieties Gloria, major and magna. Given approximately the same number of flowers on a plant of each, grown in the same way side by side,

spits and bringing the lower soil up to the surface each time. Last year the peat moss manure was just dug in for certain vegetables one spit deep. The result upon early Potatoes was satisfactory, but the presence of small white mites was noticeable in the tubers. For midseason and late Peas I usually prepare trenches, and in these the peat moss manure was dug in a spit deep. The Peas germinated freely, and looked well until the growth was about six inches high, when the foliage and stems turned brown and died. Several rows behaved like this. Upon examination I discovered that the peat manure around the roots was infested with mites, as were also the roots and stems of the plants. The plants, apparently, were all right until the roots came in contact with the manure. Evidence that the manure was responsible for this was the fact that other rows of Peas which had straw manure were quite satisfactory and growing on the same patch of ground. I may also add that others in this district experienced the same trouble where peat moss manure was used, and good results where they had also used other manure. Our

Crocus Sieberi in Essex and Scotland.—I was rather surprised to see that *Crocus Sieberi* was no further forward in an Essex garden the other day than with me in the south-east of Kirkcudbrightshire. In ordinary seasons there would be from a week to a fortnight's difference between the two. *C. Sieberi* is one of the best of the early *Crocus* species, and ought to be much more cultivated for its purple flowers. It is now very cheap, and should be planted in quantity.—
ARNOTT, *Maxwelltown, Kirkcudbrightshire*.

Canker in Fruit Trees.—I quite agree with "E. M.," page 78, issue February 14, in his remarks on the cause of canker in fruit trees. I have cured very bad cases of canker, mainly by dealing with the roots. I will only refer to one case now. A half-standard of Cox's Orange Pippin was very badly cankered. I was asked to try to cure it. We took out a trench, cut off the main roots permeating the cold, clayey subsoil, and burrowed well under the tree; then filled the trench with lighter loam and plenty of grit. The canker was so bad at the junction of the head branches with the main stem that one could see through the holes. All the cankered part was cut away and the wounds dressed with undiluted air tree oil. The stems healed, the bark grew healthily and covered the holes. The tree bore a heavy crop of handsome fruits the following year, and did not suffer from canker afterwards.—G. G.

—A most interesting article, of great value to all fruit-growers, appeared on page 56, in the issue of January 31. Having very much of this canker to deal with, I can only add that I find Stockholm tar the best for healing the canker wounds after cutting out the disease. The canker is very far-reaching, as in many instances, when cutting off the diseased shoot, I have to make it still further cut, as the canker is so plainly seen in the wood when cut. As a wet season develops the spread of the disease, and knowing that in our silty soil the roots run down, I have done much root-pruning to advantage. I might here say that I find our underground soil, or, rather, it, in a wet year, excessively wet, almost a running sand—poor indeed for top fruits—yet we do fairly well by feeding with basic slag, &c., avoiding stable manure. There is not the least doubt the free use of the latter does encourage the free wood growth, which, being difficult to open, is a ready prey to canker.—STEPHEN CASTLE.

—I have read with interest the remarks by "Scientist" and "E. M." on this subject. "Scientist" points out the danger of subjecting the trees to attacks by the breaking of the bark through carelessness in gathering fruit, pruning and other work. But from experience in this particular place the larger trees seem to fare best. Small pyramids and young trees that one can gather fruit from and prune without damaging are attacked much more severely. I were to cut out every bit of canker or diseased patches, certainly I should have many useless stocks, whatever may be thought of a cankered tree. It would cause me to begin afresh every year. I prefer to check if possible, and help Nature to heal, rather than do too much cutting and removing. I quite endorse the remarks about being careful to keep the bark sound, and one cannot be too careful against insect attacks. A few years ago a case came under my notice that was perhaps, worthy of quoting. A cottager had a standard Apple tree badly cankered about four feet from the ground. After removing thoroughly the diseased bark and decayed wood, he

applied Stockholm tar, and then placed a bandage around to assist protection. Whatever may be the experience of applying tar as a remedy, that particular tree to-day is healthy and fruitful. I have Ribston Pippin and Cox's Orange Pippin cankered slightly, while Lord Suffield, Reinette du Canada and Belle de Pontoise are almost killed. With regard to "E. M.'s" note, the soil here corresponds exactly; but I notice that certain varieties canker worse on certain stocks. Longfield (Canadian), a never-failing cropper, cankers worse on the free stock than on the Paradise stock. Baldwin seems useless on any stock in this neighbourhood. North Star on the free stock does fairly well; on the Paradise stock it is almost worthless.—J. J. G., *Penzance*.

—Permit me to record my experience and conclusions re canker in the Apple tree. "Scientist" (page 56, issue January 31) and "E. M." (page 78, issue February 14) have each, from different standpoints, diagnosed the cause, and suggested the cure for this common disease. While accepting in the main "Scientist's" theory, I am disposed, from my own experience, observation and reading, to say that "E. M." is on the true lines as to the origin of this mischievous pest. My knowledge of the disease points to the conclusion that soil has a very considerable influence in inducing canker. The majority of practical gardeners, while always grateful to scientists for their research and discoveries, have to be content to know and act according to mere elementary principles. Those principles are discovered in practice. "E. M." has noticed that certain causes produce certain effects. Reasoning from effect to cause, he concludes that a water-logged clay soil is apparently a predisposing cause of canker. I wish to state that it is my opinion also. Whatever may be true as to "Scientist's" theory of canker, its cause and cure, it seems to me that anything in the constitution or condition of the soil which tends to lower the vitality of a tree will make it more liable to develop canker. I have charge of a garden, closely surrounded by trees on the east, south and west. The soil is a stiff heavy clay, resting on an undrained subsoil of blue clay. In certain parts of this garden, no matter what variety of Apple I have planted, it eventually succumbed to the disease in question. As the healthy, vigorous person is found, as a rule, to be proof against tubercular troubles, so the robust, healthy tree is as a rule immune from canker. The tendency to tubercular affections may be mainly hereditary, but I am persuaded that the tendency to canker is to be found chiefly in root conditions. As the mere presence of fat is not evidence of robust health in the human being, so the fact of gross wood is not evidence of vigour in the case of fruit trees. Too much growth is, to the experienced eye, in some varieties of Apples a sure sign of a deficiency, and not of an excess of health. The lesson seems to be to make the root conditions right, if it can be done; but if it cannot be done—well, expect canker.—GEORGE JOHNSTON, *Ashfield Lodge, Cootehill*.

FORTHCOMING EVENTS.

March 9.—United Horticultural Benefit and Provident Society's Committee Meeting.

March 10.—Royal Horticultural Society's Bulb Show (two days).

March 12.—Manchester and North of England Orchid Society's Meeting.

March 13.—Beckenham Horticultural Society's Meeting.

DAFFODIL NOTES.

The New Poetaz.—It may be news to some readers to know that there exists alongside of the now well-known Poetaz of van der Schoot (Alsace, Elvira, Aspasia, Jaune à Merveille, Irene and Sunset, to name the six I think the best) another set, raised for the most part, if not entirely, in the village of Limmen by one Albert Vis, a sort of bulb recluse, at whose death a few years since they passed into different hands. I believe the exact knowledge of the cross from which he got his hybrids died with him, but it is said to have been a Poet fertilised with pollen of some of the Tazettas. This, it will be remembered, is the origin of what I must call, in contradistinction to these, the older Poetaz. If my facts are correct, it then becomes a matter of peculiar interest to raisers to know that the newer ones are of quite a different type in both habit and inflorescence, featuring as they do in stem, in height, in truss, in scent, and in individual flowers the Tazetta parent in a greater degree than those raised by van der Schoot at Hillegom. I have summered and wintered four of them for three years, so I feel I am in a position to pronounce judgment upon them. My verdict is that they are excellent as pot plants; and inasmuch as there are delightful combinations of colour to be found among them which are wanting in the older ones, I fancy they have a great future before them. Distinction, a fine, large-flowered variety with a pale red cup and soft yellow, undulating perianth, with a fair number of blooms to a truss; and Albert Vis, which has a big rich orange eye in the centre of a well-proportioned pure white perianth, and with a smaller quota of flowers to a stem than is found in the above-mentioned Distinction, were both to be found in some retail lists last autumn, so that I hope someone who has bought them will give us a note in THE GARDEN as to his experience with them. I have also grown Orange Blossom and Orange Cup for the same number of years as the preceding. The former is a long-stalked Albert Vis, but in other respects very similar. The latter is on the lines of Distinction, but the cup has a real red edge, which is doubled, puckered and pleated in a way that at the moment I cannot recall in any other Narcissus or Daffodil.

Thanks to the kindness and courtesy of Messrs. M. van Waveren and Sons, I have been able to increase my collection this spring, and I am now busy making the acquaintance of some of the others of this new race. Of these I will write in my next notes, when all the different varieties have flowered. Visitors to the "Midland" last year will remember a collection of them from Mr. H. Prins of Lisse, but they were so badly set up and so out of condition that they did not do themselves justice. Moreover, they had been grown in the open, I expect, and they are not at their best then.

Daffodils in New Zealand.—Of course, one has known what a voracious appetite these two islands have had for years for new varieties, and that lately the pangs of hunger have been partly assuaged by home-grown food; but since the publication of the Daffodil Year Book I have become aware that I under-estimated both the one and the other. I am hoping to include two or three articles upon what is going on "down there" in the 1914 edition. The following extract from an article in one of the New Zealand papers by a very keen and successful amateur, Mrs. Maclean of Oamaru, who visited three of the chief shows last spring

(that is, last September and October), will be of interest, and, I hope, will not unduly depress my "Sic transit gloria mundi" friend at Rye. After dealing in detail with each show, she thus ends: "Comparing the three shows, there is not the slightest doubt but Oamaru leads so far as excellence of cultivation is concerned. Naturally, a much larger number of the latest and most expensive varieties are shown in Dunedin and Christchurch, and these, of course, take the eye; but where the same variety is grown and shown at each show the Oamaru flower is the best, and any exhibitor who can secure honours at Oamaru need not have any fear of competing with every prospect of success at either of the other shows. Locally, the season seems to have suited Barris and incomparabilises with red in the cup, as was evidenced by the many flowers of these divisions which were exhibited here (Oamaru) in perfect condition. New Zealand seedlings compare more than favourably with imported flowers so far as size is concerned, and when colour and form of

took place fifty-eight years ago, I feel it is unlikely that anyone is living who can enlighten us.

Daffodils from Sweden.—Has anyone in England done what I have done this last month—had Daffodils in their greenhouse that had been grown last year in Sweden? Hearing that a philanthropic lady there—the Lady Sigrid Stjernsward—had started a Daffodil farm at Widtsköfle in Scania some four or five years since, I wrote for some bulbs, and before long a couple of packages arrived by parcel post, which contained samples of some of the better-known varieties in commerce. Part I potted up and grew them alongside of my others; part I planted in the garden. All of the former have now bloomed, and they have been carefully compared with the same varieties from other sources. Mrs. Langtry, Barri conspicuus and princeps were decidedly weak in growth and bore few flowers; whereas Empress, Sir Watkin, ornatus, Golden Spur and Queen Bess were all very good, and quite up to either English or Dutch grown bulbs; in fact, in the

SEASONABLE WORK AMONG THE ROSES.

It is not too late to plant Roses if a little extra care is taken. I have often had even better results from spring planting than when done during the midwinter months. One of the chief points is to have everything ready, and so avoid any unnecessary exposure of the roots, which, in many cases, will be more or less active and easily affected by a drying wind or sun. Pruning will be dealt with fully in a week or two, but I may say it is better in all cases to prune newly planted Roses down close, and, this being the case, you will have little, if any, wood exposed to drying influences, which will be a great help to the more uniform advance of both roots and top growth. Avoid getting upon freshly moved ground if it is wet. Use a few boards if it must be done, but it is far better to delay the work for a few days. As a further

help in not treading until the soil has become dry and more settled, I would prune before planting in spring. At the same time, the soil should be fairly firm around the roots and base of the plants. Should you be planting standards, do not fail to afford some efficient support at once. They must have it the first year, and it is a pity to allow them to sway at all, which cannot but do harm to and strain the newly forming roots.

As one looks over his Roses at this pruning-time a few blanks will probably be found in the beds and borders. Too often one does not take enough care in replacing these. Let a better preparation be made by moving more soil and making a slightly larger hole. The slight injury to its neighbour's roots will not matter, and it will be a better start for the new-comer. When pruning pegged-down Roses, do not miss the opportunity to feed by mulching and top cultivation of the soil before laying the young wood down again. You will not have such a good chance again during the whole season. Mulching generally may be done after pruning, and will still be in ample time to feed the roots at the period they

most need it. A properly mulched Rose bed or border in which the trees have been pruned has a pleasing and promising look, while it needs no more attention for a considerable time. I may say that Roses are by no means so particular as many other subjects about the class of manure they receive, but the best and its application has been frequently treated of in these pages. I only hint that now is a most seasonable time to use this.

Under glass our plants should be in full growth, and will need free waterings of weak liquid manures. I am firmly convinced that many checks to growth and other partial failures are caused by the use of overstrong liquids. It is far better to spread the same amount of stimulant over double the number of applications than run the risk of injury to the tips of healthy growing roots. But it is one of the most common errors. Simply because the plant is doing well it does not want a strong dose of liquid manure to maintain its vigour; much better feed steadily and more often.



A PAN OF SAXIFRAGA BURSERIANA WITH OVER THREE HUNDRED BLOOMS.

an equal standard are produced here, there will not be any doubt as to which are the better flowers, but at present the home-grown ones are ahead in these qualities, and, after all, perfect form and colour are superior to size."

A Prehistoric Exhibit.—From March, 1851, to March, 1859, there existed an influential society called "The National Floricultural Society." Quoting from the "Address" in Vol. I., Part I., it was formed to supply the want of a "tribunal to test new Florists' flowers and hybrids." On looking over its Transactions, I found, under the date of April 24, 1856, this entry:

"The following were the subjects of exhibition:
"Azalea from Mr. E. A. Hamp.
"Auriculas from Mr. C. Turner.

"Narcissi from Mr. Leeds," &c.

Unfortunately for us, these seedlings received no award, or otherwise we would have had their names and descriptions, and as this exhibition

case of Queen Bess, superior. Five bulbs bore ten fine blooms—better I have never seen. All the above flowered at the same time as Dutch-grown bulbs.

JOSEPH JACOB.

A MAGNIFICENT PLANT OF SAXIFRAGA BURSERIANA.

A GOOD deal of interest was centred around a remarkably well-grown pan of Saxifraga burseriana which gained a cultural commendation at the last meeting of the Royal Horticultural Society. Over three hundred blooms were crowded together in a profuse mass, almost covering up the dense rosettes of foliage. It was shown and grown by Mr. F. Lloyd of Croydon, who for some years has grown alpine plants, notably Saxifrages, with marked success. The magnificent specimen which we illustrate above reflected great credit upon the cultivator, and well deserved the cultural commendation bestowed upon it.

Insects, too, will probably be more trouble as the season advances. Here, also, too severe measures, with an idea of immediate effect, are altogether wrong, and not infrequently do as much, or more, harm than the enemy itself. Use weaker solutions and be more persistent in your washings, and you will have better results combined with safety.

The need for ventilation should be avoided as far as possible by a careful regulation of fire-heat, and I am sure much ventilation might be made unnecessary if a little more thought was used in this direction. Mildew is sure to trouble you if you vary the temperature much and allow the slightest draught. Much benefit has been found here by dissolving a little extra flowers of sulphur in the washes generally used. If the solution is kept well on the move, as it should be, you will find a very light and unsightly dusting of sulphur left both above and below the foliage. This is not only harmless, but is a good preventive, and need not be used except to leave the faintest dusting of sulphur upon the foliage.

Sussex.

A. P.

THE JAPANESE MAPLES.

THE various forms of Japanese Maples, or *Acers*, are always popular in gardens by reason of their dainty, elegant leafage and brilliant colouring. Even in cold districts, where they are not a success out of doors, people often grow them in pots or tubs to stand in a conservatory or greenhouse during spring, for their prettily tinted leaves at that period make them invaluable for grouping with forced shrubs, bulbs and other plants. Then, towards May they are stood out of doors, to be placed in the conservatory again in autumn for the few weeks during which their leaves are gay with brilliant autumn tints. The *palmatum* group is divided into several sections, according to the lobing of the leaves. The *septemlobum* section may be recognised by reason of its leaves being considerably larger than those of others in the group. They may be as much as 5 inches long, exclusive of the stalk, and 4 inches wide. The number of lobes into which the leaves are divided varies, but is usually from seven to eleven, and they are divided almost to the base. Each lobe is again prettily cut. The colour of the leaves varies on different plants almost as much as the lobing, and for this reason distinctive names have been given to the various forms, such as *atropurpureum*, *bicolor*, *elegans*, and *elegans purpureum*. In spring the colour varies from bright bronze to greenish bronze or pale green, and in autumn from orange scarlet to scarlet and deep red. In the South and parts of the Midlands the Japanese Maples thrive satisfactorily in a sheltered part of the garden, but in many parts of the North they are not recommended for outdoor work. In West Lancashire good specimens are sometimes seen in the open.

D.

SEASONABLE NOTES ON AURICULAS.

WITH the arrival of March some of the early varieties show signs of flowering, and it is essential that sufficient protection be given to keep out frost. The grower must study the weather, and not be taken off his guard by bright, sunny days, because these are often followed by several degrees of frost at night. Some cultivators remove the plants that are pushing up their spikes into a cool, low house; but even a small quantity of fire-heat will sometimes draw the plants and the scapes, which render them very unsatisfactory from a decorative standpoint. Before the first flowers open I always like to vaporise the frame to kill any green fly that

and are considered by some to be more easily grown than the show varieties.

The Fancy Auricula.—Seedlings which cannot be arranged in either of the show classes previously mentioned, but at the same time possess certain good qualities which make them worth growing, are referred to as fancy Auriculas.

Exhibitions.—Next month I shall give a few details on preparing the plants for show. In the meantime a schedule should be procured, the classes selected and the plants watched, so that they are in full beauty on the day required. If they are coming on too fast, a north position should be chosen, and the lights removed whenever the weather is mild and dry. T. W. BRISCOE.

MAGNOLIA STELLATA.

To *Magnolia stellata* belongs the distinction of being the first *Magnolia* to open its flowers. It



THE FIRST MAGNOLIA TO BLOOM (M. STELLATA).

may be on the plants. The operation is not required again till the flowering season is over.

Types of the Auricula.—There are two distinct sections of Auricula—the garden kinds, derived from *Primula Auricula*, and the alpine varieties, from *P. pubescens*. The latter group contains some of the most beautiful tints and shades, while the former are often covered with a delicate meal or farina. These are known as show Auriculas and are divided into four sections, viz., green edge, grey edge, white edge, and selfs. The first three are very beautiful, but I am afraid they are not grown to the extent that their merits deserve. The selfs are a class where the colour extends from the paste to the edge of the petal, and are, in consequence, very attractive, while in some instances the foliage is densely coated with farina. Although the selfs are largely grown, the premier place in regard to popularity must be awarded to the alpiners, which are devoid of all meal or farina either on the leaves or flower

is a deciduous species, and the blooms open before the leaves unfold. Sometimes the flowers suffer for this earliness in being cut down by spring frosts. In a mild spring, however, there is no shrub more beautiful, for on a bright, sunny day the fragrant flowers light up the surrounding landscape with telling effect. It is a native of Japan, and is often cultivated in this country under its old name, *M. halleana*. Like other *Magnolias*, it is a little fastidious about soil and situation, showing a marked preference for a light, loamy soil of an open nature and a warm position sheltered from strong winds. It should be borne in mind that *Magnolias* resent disturbance at the root more, perhaps, than any other class of plants. When transplanting has to be accomplished, it is best done in the spring, immediately after flowering and as new growth commences. The fine fibrous roots require very careful handling, while, after planting, the shrubs should be sheltered under mats and freely syringed if the weather is dry.

STOCK BEAUTY OF NICE.

Of all the gorgeous array of annuals, few can equal the Stock, and of its many varieties Beauty of Nice must, I think, be awarded first place. This variety can be had in bloom at almost any season of the year, and where a large quantity of cut flowers is required, it is invaluable, as it blooms in about three months from the date of sowing, lasts exceptionally well in water and, above all, has a perfume with which few other flowers can compare. I find it most useful under glass for giving cut blooms in early summer, when the bulbs and spring flowers are all over and the summer flowers not yet in bloom. In this cold climate I sow about the middle of February to have the blooms ready about the end of May, but those who are situated in a warmer spot would do better to defer sowing until the end of the month.

Its cultivation is very simple, and I have adopted the following method with great success. Sow the seed thinly in pans of very sandy soil, just covering the seed with a sprinkling of sand, and place the pans in slight bottom-heat until germination takes place, which will be in about eight or ten days. When the young seedlings appear, stand the pans on a shelf near the glass in a cool house and grow on steadily, taking care not to weaken the young plants by forcing. As soon as they are ready, prick them off three into a 3-inch pot, using a light, rich compost. Care should be taken not to discard the weaker seedlings, as these invariably produce the double flowers. As soon as the young roots come to the sides of the small pots, repot into 5-inch or 6-inch ones, the latter preferably, in which they will flower. A compost consisting of two parts good fibrous loam, half a part each of leaf-mould and well-rotted manure, and sufficient sharp sand to keep it porous, will be found most suitable for the final potting. If any bone-meal is at hand, a sprinkling of this can be added, with only the best results. When the flower-buds appear, frequent doses of liquid manure are necessary to produce large spikes, and a rich top-dressing well repays any time and trouble spent in applying it. To produce the best results, a cool but steady temperature is necessary, hard forcing at any period being highly detrimental to the production of good spikes.

One word of warning when buying the seed: Go to a reliable firm and be prepared to pay a reasonable price for it, as only the best strains will yield a high proportion of double flowers. I personally like the pink variety best; but seed can also be had of yellow, white and mauve, and is simply a matter of taste. I am sure that anyone who buys a packet of good seed and gives the plants

a fair chance will be rewarded with a quantity of the sweetest blooms, which in beauty of form and fragrance are unsurpassed by any other annual.

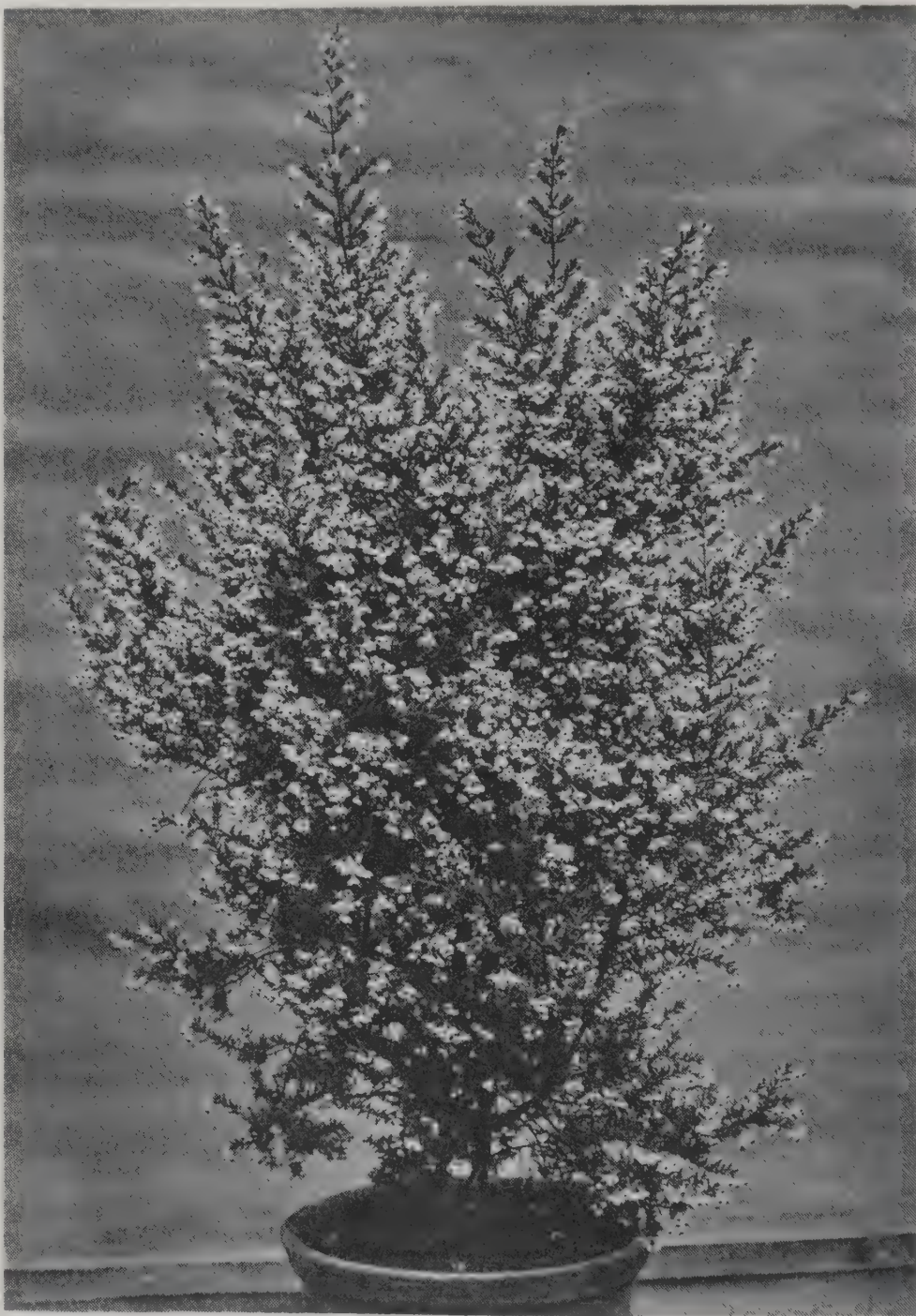
Troon, Ayrshire.

AN AMATEUR.

A COOL GREENHOUSE HEATH.

ERICA MELANTHERA.

This is beyond doubt one of the most profusely flowered of all greenhouse Heaths. The flowers are usually white or tinged with pink, but the distinguishing feature is seen in the prominent black anthers seated in the centre of each tiny



ERICA MELANTHERA. AN EASILY GROWN HEATH FOR THE COOL GREENHOUSE.

flower, a peculiarity which has earned for this Erica the title of the Black-anthered Heath. The flowering season is from autumn till spring, and in the depth of winter pot plants, compact in growth and smothered in bloom, are sent in thousands to our leading flower markets, this being certain proof of the popularity of *E. melanthera*, if such were needed. The chief point to observe in its cultivation is that it resents a warm temperature. A cool greenhouse will suit its requirements throughout the flowering season, while in the summer-time the plants should be placed in unheated frames from which the lights are raised or removed on all favourable occasions.

SOME BEAUTIFUL ANNUAL FLOWERS.

THE NEMESIAS.

THE time for deciding what is to fill our beds and borders in the summer is now at hand once more, and I should like to advise amateurs to give *Nemesias* a trial. There are, I am sorry to say, only too many who have never had the pleasure of growing these lovely annuals, and I am sure the only reason that can be given is that they do not know what *Nemesias* are capable of doing. For making a brilliant display I know of nothing to surpass them, and the flowering season extends over a much longer period than that of the majority of flowers. Being half-hardy annuals, they require a little heat to assist germination if sown early in the year, but this is not essential if sown later on.

Their cultivation is simple, and I have always found the following treatment very successful: About the middle of March take some well-crooked pans and fill to within an inch of the rims with a light compost containing a good percentage of old leaf-mould. Over the surface sprinkle a layer of very fine soil, and on this sow the seed very thinly. Just cover over with fine soil or sand and place in gentle heat. Cover each pan with a sheet of glass and keep well shaded until germination has taken place, when the young seedlings must be gradually exposed to the light and air. Great care must be exercised in watering, as negligence in this respect will cause the seedlings to damp off wholesale. As soon as ready, prick them off into boxes about two inches apart each way, using a slightly stiffer compost than before. Place over the crocks a good layer of very old manure to keep the young plants well nourished until they are planted out. Grow them on in gentle heat until they have made nice little specimens, when they must be gradually inured to a cool temperature, as this is necessary to keep them robust and strong. About the end of April they can be safely transferred to cold frames which have been filled

to within a few inches of the glass with good soil enriched with leaf-mould. The latter half of May is the best time to plant them out in their flowering quarters, and the beds must be well enriched with a liberal dressing of manure. They should be well dug and the manure thoroughly mixed with the soil some time before planting out, so that they may have had plenty of time to settle down to their normal level.

Those who wish to give these annuals a trial, but have not a heated greenhouse at their disposal, can raise a fine batch of plants by sowing the seed in cold frames about the middle of April. Keep close and well shaded until the young seedlings

appear, when they must be given a little air to keep them sturdy. The after-treatment is the same as previously described, and watering must be done with great care. If a spell of frost should come, throw some mats over the frames, and these will keep all safe. These plants will not, of course, flower quite so early as those raised in heat earlier in the year, but when the flowers do come they will be every bit as good. When the young plants are well established in their flowering quarters, give weak doses of liquid manure, and, should the weather be very dry, a mulch of old manure will be found beneficial, and will considerably prolong the season of flowering.

Most people prefer the mixed colours, chiefly, I think, because the shades are so numerous and varied and all blend so well together. There are, however, blue, orange, white, and crimson varieties which come true to colour from seed, and all are very beautiful, especially the blue, which is a lovely pure shade. A good strain of seed is essential, so when buying it go to a good, reliable firm and be prepared to pay a reasonable price for it. Amateurs would do well to try these lovely annuals, and I am sure they will be delighted with the glorious display of colour which a mass of *Nemesias* produces.

Ayrshire.

G. B.

HARDY CHINESE PRIMULAS.

(Continued from page 108.)

P. helodoxa (Balf. fil.).—This promises to be a most valuable plant. It belongs to the *Candelabras*, and has all the good qualities of *P. Bulleyana*. It is of strong growth and bears handsome scapes of whorls of dark yellow flowers in many tiers. It was collected for Mr. J. C. Wilson, Caerhays Castle, in 1912 by Mr. Forrest. It requires the same treatment as *P. Bulleyana*.

P. Knuthiana (Pax).—This has but recently come into cultivation. The flowers are lilac or lilac mauve. It resembles *P. frondosa*, but is more difficult to grow. It belongs to the *Sertulium* section.

P. Littoniana (G. Forrest).—This most distinct member of the *Muscaroides* section does well with me in pure pulverised loam in a well-drained, shady position. If a piece of glass is placed over it during the winter, it will prove perennial. Unless pollinated it does not seed here, but if that is done it seeds freely. A most handsome and striking plant, with its long spikes of flowers, sometimes 6 inches long, with scarlet bracts and lavender or rose lavender flowers. Collected by Mr. Forrest in the Tali region and introduced in 1908 by Messrs. Bees, Limited.

P. Maximowiczii (Regel).—A strong-growing, fragrant species collected in North China by Mr. Wilson and introduced into cultivation by Messrs. Veitch in 1906. The leaves are distinctly petiolate, from 3 centimetres to 5 centimetres long, narrowly elliptical, acute and denticulate. The scape is from 20 centimetres to 40 centimetres in height, and bears in May a many-flowered umbel of small, dark purple or, in some cases,

brick red flowers. I had this plant growing luxuriantly in the open border, but, as it has died, I think that it must be only half-hardy. Cultivation: Should be grown in a cold house in good loamy soil in full sun.

P. nessensis (G. Forrest).—Introduced in 1911 by Messrs. Bees from seed collected by Mr. Forrest. It has pretty flowers of cherry pink in moderate-sized heads. It comes from Yunnan, and belongs to the *Denticulata* section. This is the plant which is being sent out by Bees, Limited, under the name of *Primula farinosa* Beesii. Cultivation: Treatment similar to *P. farinosa*.

P. pinnatifida (Franch.), a beautiful little plant with blue flowers, has not proved hardy with me in the open, but in a cold house it should be satisfactory. It belongs to the *Muscaroides* section.

P. Poissonii (Franch.), of the *Candelabra* section, has been in cultivation since 1890, introduced by the Jardin des Plantes, Paris. It resembles *P. angustidens* in many ways, but has

P. pulverulenta (Duthie).—Introduced from West Szechwan by Messrs. Veitch in 1908, this *Candelabra* *Primula* has become a general favourite. It is a plant for every garden, and grows from 2 feet to 3 feet high in rich, moist soil. It has crimson-purple flowers in whorls. It seeds freely, but the lovely white variety Mrs. Berkeley fails to do so with me (see page 42, issue January 24). Cultivation: Good rich garden soil in half shade. The illustration represents a fine colony of this beautiful variety in Messrs. J. Veitch and Sons' Coombe Wood Nursery, and is from a photograph by Mr. R. A. Malby.

P. pycnoloba (Bur. et Franch.).—The sole known member of the section *Pycnoloba*. This species has a cluster of flowers, with a long, creamy, membranous, wide-mouthed horn, filled at the mouth by the small, dark red corolla. It has hairy leaves, with petioles, and is hardy if it is protected by a sheet of glass from winter moisture. Collected by Mr. Wilson in Central Szechwan and introduced by Messrs. Veitch in 1906.



A BEAUTIFUL GROUP OF PRIMULA PULVERULENTA MRS. R. V. BERKELEY.

shorter and broader leaves, and the flowers, which are fewer in number, are larger and of a deeper purple. *P. Poissonii* has not proved hardy with me, but it is so in some parts of England and Ireland. Cultivation: Good rich soil in damp situation. Half shade.

P. pulchella (Franch.), of the *Nivalis* section, with blue or purple flowers, is very beautiful, and seems to be fairly hardy. It is not yet in the hands of the public.

P. pulchelloides (E. K. Ward) belongs also to the *Nivalis* section. The leaves and stems are covered with yellow farina. The slender flower-scape rises well above the leaves and carries at its summit a number of pale lilac flowers. Both *P. pulchella* and *P. pulchelloides* owe their introduction to Messrs. Bees in 1911. Cultivation: I have no experience of this in the open, but in pots in a cold house it does well as a pot plant in well-drained gritty soil.

P. septemloba (Franch.).—Introduced in 1906 by Messrs. Bees, Limited, from seed sent by Mr. Forrest. The leaves are lobed like a *Geranium*, as are all the members of the section *Geranoides*, to which this species belongs. In most of its characteristics it resembles *P. Gagnepainii*, but with me it has not proved hardy in the open.

P. sibirica will be dealt with under Himalayan species.

P. sinolisteri (Balf. fil.).—An interesting micro-form of *P. obconica*, sent out as *P. Listeri*, but not that species which is Himalayan. It is barely hardy with me, but should be so in the South. The reniform, orbicular leaves have not the irritant hairs of *P. obconica*. There are two forms, one white flowered, the other pink. *P. sinolisteri* is very free-flowering. Cultivation: Should be treated in the same way as *P. obconica*.

P. Veitchii.—One of the hardiest of all garden *Primulas*, *P. Veitchii* came from West Szechwan

in 1906, and was introduced by Messrs. Veitch through their collector, Mr. Wilson. It grows well in ordinary soil, and gives an abundance of magenta flowers on stems 18 inches or so high. It belongs to the *Cortusoides* section and has handsome leaves.

P. vittata (Bur. et Franch.).—I think the true *P. vittata* (with which may be discussed *P. secundiflora* as closely resembling it) will only prove half-hardy. *P. vittata* was introduced in 1905 by Messrs. Veitch from seeds sent by Mr. Wilson. It has elongated, erect leaves and drooping pink-purple flowers, with a white mealy band to the calyx. It is rare in cultivation, and what we see in gardens masquerading under the name is *P. angustidens*, a plant which it in no way resembles. *P. secundiflora* was collected by Mr. Forrest and introduced by Messrs. Bees in 1908. It has oblong-elliptic leaves, horizontal in a rosette. *P. secundiflora* does well with me in a cold frame, but whether it is hardy during the winter in cold districts I am not prepared to say.

JOHN MACWATT.

Morelands, Duns.

THE CULTIVATION OF ASPARAGUS.

THIS is one of the most important vegetables, and one that does not receive as much attention as its merits deserve. In some gardens the same roots will last in a satisfactory condition for twenty years without renewal, while in other parts the beds require making often. The most suitable soil is a deep, friable loam with a porous subsoil, as this does not require much preparation. Deeply dug and well manured, it will last for years in good condition if yearly attention is given to the addition of suitable manurial stimulant. The soil which requires the most preparation is that which is naturally heavy in character, some 18 inches or 2 feet deep below which is a hard pan of clay-like matter almost impervious to water. If this is not broken up to a considerable depth to allow water to pass away quickly, the succulent Asparagus roots suffer a check, and under such conditions cannot grow vigorously, as they should to produce heads of the desired quality.

Treatment of Poor Soil.—The best method of bringing such soil into a suitable condition would be to remove some of this hard pan of subsoil, replacing it with lightening material when trenching is proceeding, and this should be done at least 3 feet deep, or, all the better, 4 feet, replacing the soil in the same position as it was found. The bottom spit or base should be broken up a foot deep.

The Size and Shape of Beds.—In unsuitable soil it is best to form beds 4 feet wide, keeping them a foot above the ordinary ground-level to ensure effective drainage. Where the soil is

naturally of a drier character, with a well-drained subsoil, special beds are not at all necessary; the plants can be equally well grown in rows 2 feet apart, thus requiring no alley space.

The Best Plants.—The common practice of forming beds of Asparagus is to purchase two year old plants from the open ground, carefully putting them out in April. A much better plan is to sow two seeds in a 3-inch pot in sandy soil during the first week in April. Stand the pots in a cold frame, shading them from bright sun and keeping the frame close to hasten germination. Directly the plants appear above the soil, remove

When to Plant.—The first week in April, when the plants are on the move, put them out in rows with a trowel, covering the crowns 2 inches with a compost of old potting soil, decayed leaves and wood-ashes to encourage quick growth. Allow a space of 15 inches between the plants, which will provide ample room for development. Should the weather set in dry, keep the surface soil freely stirred to conserve the moisture. As the growth progresses support the "grass" if it is liable to be bent or broken by strong wind. The second year will see much progress, and every encouragement should be given to induce growth. Liquid manure applied freely will have considerable influence on the subsequent progress of the plants, and frequent stirring of the soil will also assist in that direction.

E. M.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Sparaxis King George V.—A brilliantly flowered sort of robust habit that should prove popular with all. In point of brilliancy it is akin to Fire King, which gained an award of merit in June, 1902. The new-comer, indeed, may well be described as a vigorous variety of that kind, and as such it will be welcome. The dominant colour of the petals is crimson-scarlet, richer scarlet near the tips, the whole in striking contrast with the deep golden colour of the tube of the flower. Shown by Messrs. Barr and Sons, Covent Garden, W.C.

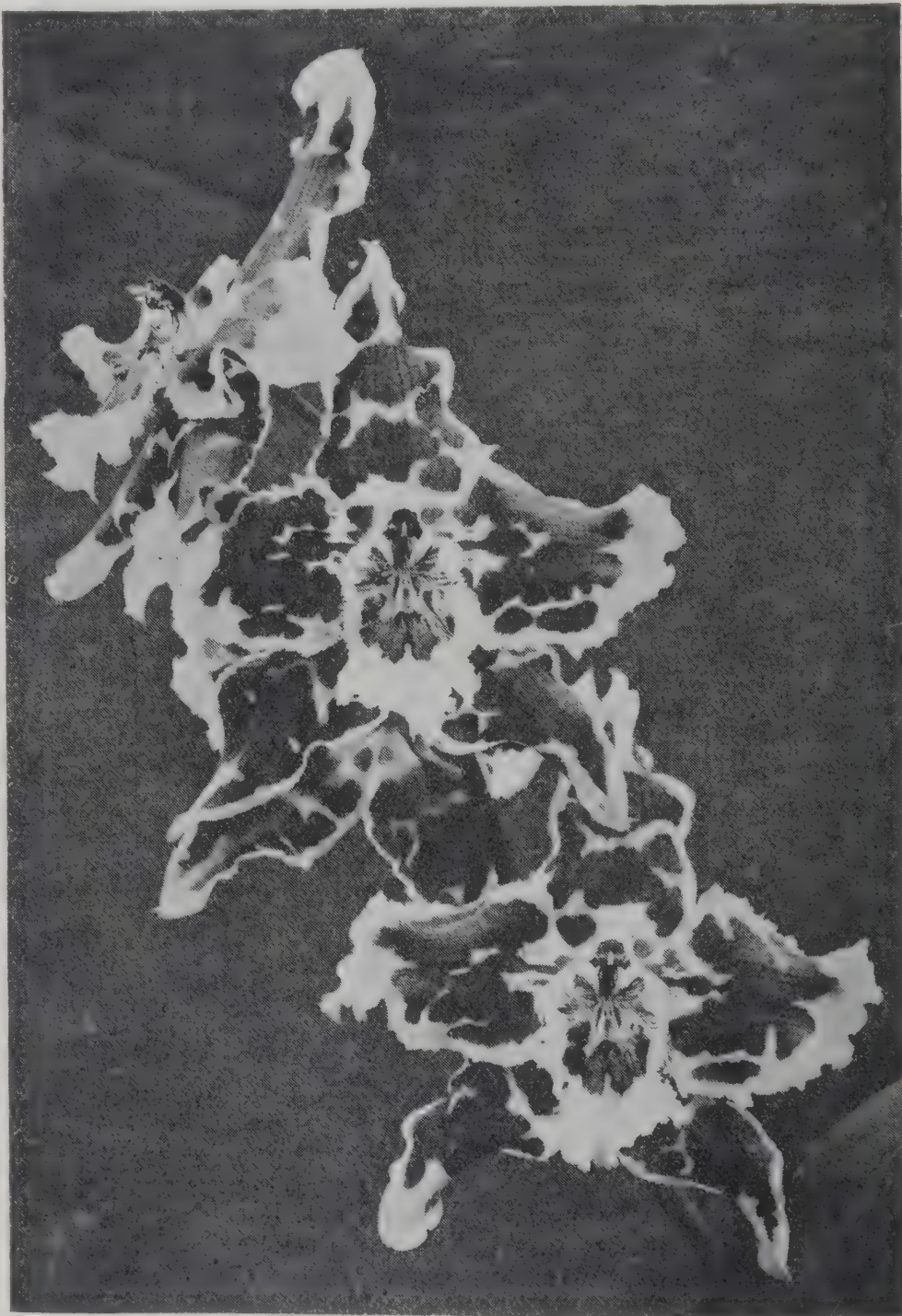
Freesia Excelsior.—A novelty of the first water; a plant possessing the vigorous growth of a Montbretia. For the sake of comparison we might refer it to a glorified *F. Leichtlinii*. The handsome, erect flowers, of remarkable substance, are coloured a rich cream, with faint touches of orange on one side of the tube. Vigour, substance of flower and marked fragrance are among the best attributes of *F. Excelsior*, which came from Messrs. Sutton and Sons, Reading.

NEW ORCHIDS.

Foremost among new Orchids is the immense *Odontoglossum Colossus*, with heavily blotched chocolate flowers from 4½ inches to 5 inches across. This is one of the largest, if not the largest *Odontoglossum* yet raised; the petals are 1½ inches

broad, with white frilled margins. The plant carried four blooms. Its parentage is unknown. Shown by Baron Bruno Schröder and awarded a first-class certificate. A similar award was granted to *Cymbidium Alexanderi* Hamilton Smith's variety, having neat ivory white flowers with a scarlet crimson lip. Shown by Mr. Hamilton Smith, Finchley. Awards of merit were granted to *Cypripedium Mogul* and the golden orange *Laelio-Cattleya Ariel*, both shown by Lieut. Colonel Sir George Holford; and to *Phalanopsis Ariadne*, shown by Messrs. Sander and Sons.

The foregoing awards were made by the Royal Horticultural Society on February 24



ODONTOGLOSSUM COLOSSUS. A BEAUTIFUL NEW VARIETY WITH VERY LARGE AND HEAVILY MOTTLED FLOWERS. (*Much reduced.*)

the shading, gradually giving air to induce sturdy growth. When it can safely be determined which is the strongest plant, remove the weaker, as one in each pot is sufficient, and eventually remove the frame-light altogether. When the plants are a few inches high, plunge the pots in ashes at the foot of a north or west wall, which will keep the roots cool during the summer and lessen the necessity for applying water, though any neglect in this respect will prevent that steady growth which is so desirable. Here the plants may remain until the following April, gradually reducing the water supply as the "grass" ripens off.

GARDENING FOR BEGINNERS.

SOME EASILY GROWN WALL PLANTS.

THE title of the text here chosen carries with it more than a suggestion that not all the plants which from time to time may be found upon walls are alike easily grown or established.

To some extent the deduction would be true, though not absolutely. Given the right kind of wall and a selection of plants to suit its special requirements, quite a large number of the subjects planted would eventually become a complete success. Quite naturally, of course, there is considerable diversity among the plants themselves—the slow growing and the quick, for example—though we must not allow such differences to create a wrong impression in our minds, since the minute-growing alpine may require neither more nor less care than a plant such as the Aubrietia, which is of much freer growth. The real difference is one of inches against yards; and those of the latter set, catching the eye by reason of the superabundance of their growth, appeal rather to the unthinking as the more easily grown. At the same time, if we view the matter closely, such exuberance will be found to be nothing more than the limitations of the plant's development, that phase of it in particular with which the subject has been endowed by Nature. Such growth is on all fours with the giant and the dwarf, the Tom Thumb Snapdragon, for example, taking as long to reach the flowering stage as its taller relative 3 feet or 4 feet high. Why it should be so is not quite clear. But this we know: that such things occur abundantly in both the animal and the vegetable kingdom, those of the latter affording the gardener greater opportunities for embellishing phases of gardening that otherwise would perforce have had to remain unadorned for all time. In no department of gardening is this more true than wall gardening, the vigorous and free-growing subjects one has now in mind providing material for ornamenting the roughest walls or embellishing as with Nature's hand old ruins or rocky places wherever they occur.

To what extent such places may be ornamented may be gathered from the white Arabis on the roadside wall in the accompanying illustration, and though certainly one of the freest, is also one of the easiest plants to increase. Every scrap of it getting into touch with damp soil will root, and in a couple of years form sheets of trailing greenery, for a long time in spring and early summer beautified by miniature Stock-like spikes of almost snowy whiteness. It is a plant for the roughest of rocky places or rudest walls, dwarfed, it may be, where the soil is scanty or poor, yet always flowering abundantly, and perhaps all the more prodigally owing to this. The best way of introducing so free-growing a subject is by means of freshly rooted cuttings as the wall is built, arranging them high up the wall so that the draping habit of the plant may receive fair play. Similarly rooted cuttings may be introduced at other times, though preferably in autumn or early spring, so as to ensure a firm foothold before the drought of summer arrives. A particularly good subject, far too rarely seen on rough walls, is

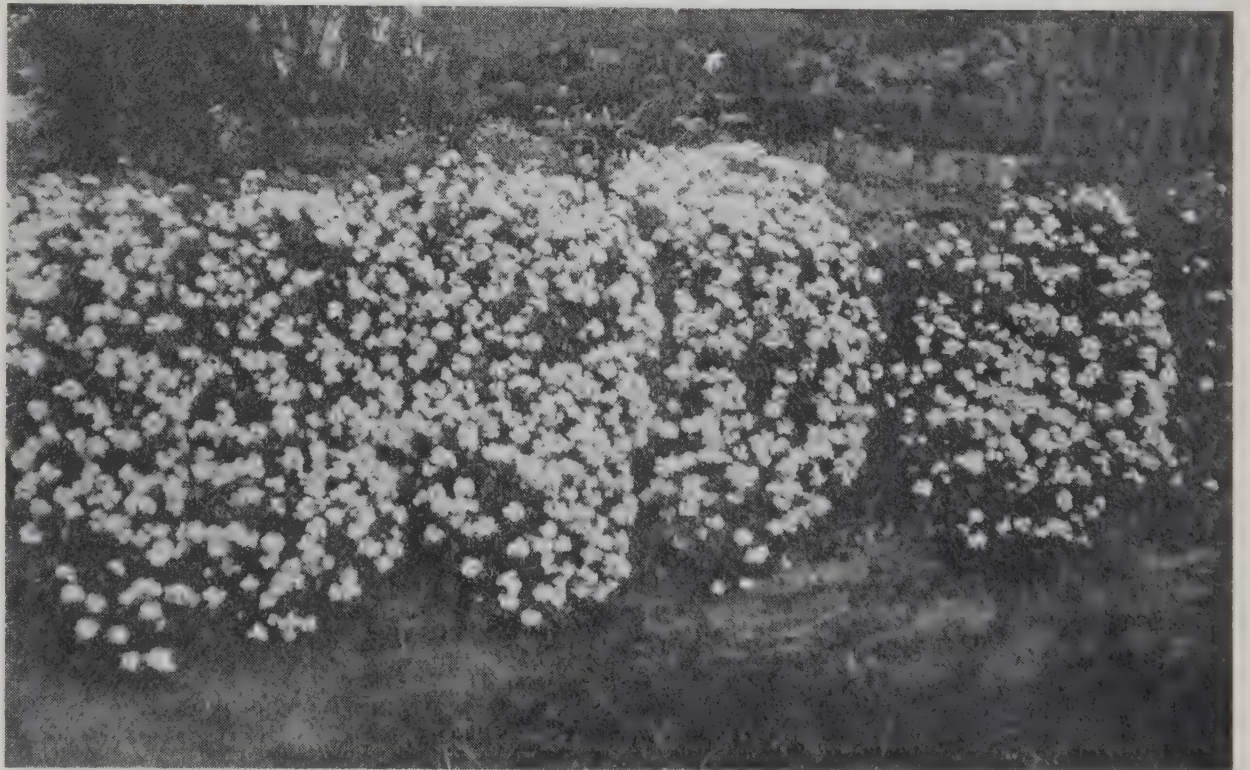
Corydalis lutea, whose elegant, Fern-like habit of growth and myriads of yellow flowers should

commend it to all. The plant is most profuse in flowering, is apparently at home in the smallest cranny or crevice, and grows and flowers apace. It is almost impossible to root cuttings of it, and seeds, which are not always plentifully produced, are the best means of introducing it. Another excellent free-growing subject best introduced by means of seeds is *Saponaria ocymoides*, which forms trailing masses of growths 3 feet or 4 feet long, smothered in their season with rose or pink flowers. The white form, *alba*, and *splendens*, with flowers more richly coloured than the type, both merit attention because of their free growth and flowering.

The Aubrietias.—These as a class are unequalled, whether for freedom of growth or flowering, hardiness or reliability; hence are good enough for all. So good, indeed, are they that one might be pardoned for suggesting an Aubrietia wall, than

named. There is also a value in Wallflower, Snapdragon, the Red Valerian (which gives brilliant sheets of colour on chalk cliffs), *Dianthus deltoides* and many more. Poppies and Thrift have a charm of their own, and so, too, has *Zauschneria californica*, which, coming late, is capable of brilliant effect. Nor can one overlook

The Great Value of Silver-leaved Plants, which, apart from their own intrinsic merit, perform, when rightly placed, an even greater service to other plants around. This is particularly true when arranged in near proximity to green-leaved plants, which they mirror into greater life by reason of the contrast they afford. Moreover, the silvery whiteness of these plants is enhanced by the drier conditions of soil and the proximity of stone. *Achillea umbellata*, *A. Clavennæ*, *Senecio incanus*, *S. argenteus* and *Sempervivum*



WHITE ARABIS OR ROCK CRESS GROWING ON A ROADSIDE WALL.

which, in its day, nothing could present a greater feast of colour. How the plants thrive in the smallest wall crevice is proverbial, so that, with a little encouragement, much might be expected of them. And they never fail. Moreover, they are free seeders, and are easily multiplied by seeds, division or cuttings; hence the supply is practically unlimited. To entirely mantle a wall with Aubrietias, it should be planted at more than one level to give effect to the object in view. Such a wall would be best if the face of it is rugged. All the same, the Aubrietias are good in isolated tufts, and gladden the eye by their rich or effective colour masses. Dr. Mules (richest violet), Lavender (a most delightful shade) and Fire King are all good, while the older forms of *deltoidea* are still as serviceable as of yore.

Iberis sempervirens is also a fine trailing plant, with white flowers, and perfectly hardy and enduring. Then one cannot omit such as *Campanula muralis*, *C. pusilla* and its varieties, these preferably for cooler places than those already

named. *arachnoideum* are all good, with *Cerastium tomentosum* for rough places.

Finally, to add a cultural note, it is important that spring-planted walls or seed-sown walls be carefully tended in the matter of watering till the plants have become established and capable of fighting their own battles. Watering should be so done that the soil is saturated, and in this way encourage the roots to penetrate the deeper recesses of the wall, where their safety will be assured.

If these few cultural hints are conscientiously attended to, and the plants named selected and planted with a reasonable exercise of common sense, many old walls and cliffs, that in a neglected state are more or less an eyesore to their owners, might be converted into beautiful features, and the expense would be very small indeed. When the beginner has mastered the cultivation of these simple, vigorous growing plants, he will find further interest in overcoming the subtleties of those that only the experienced can bring to perfection.

F. H. JENKINS

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

New Vine Borders.—Planting should not take place before the end of this month. By that time the soil should have been warmed through, and the young Vines will immediately start into growth. The soil should be carefully removed from the roots, and this is best done while it is in a moist condition. No fire-heat will be necessary. If the Vines were cut down in early winter, so much the better; but this must not be attempted now, or the Vines will suffer seriously.

The Early Muscat Vinery.—If the Vines were started in December, they will soon be showing flower, and during this period the temperature should not fall below 70°. Ventilate with caution, and do not allow the atmosphere to become stagnant.

Plants Under Glass.

Campanula pyramidalis.—Plants of this, having been wintered in cold pits, should now be examined, the surface soil pricked up, and a top-dressing of fine loam and bone-meal applied. Ventilate the pit freely, and as the season advances give frequent waterings of liquid manure. These plants when well grown are valuable for the conservatory during the summer and autumn.

The Conservatory.—Let this be kept as attractive as possible by the introduction of fresh batches of flowering plants, which may include Rhododendrons, Lilacs, Wistarias, Deutzias and Azaleas, as well as various kinds of bulbs. Plants which are being grown for Easter decorations should be given plenty of atmospheric moisture. Very little fire-heat should be necessary now, but it is well to have them in a forward state, so that there may be no mistake about the supply of such plants as Lilioms, Spiræas, Richardias and Solomon's Seal, as well as various kinds of flowering shrubs.

Fuchsias.—Old plants for summer flowering may now be cut hard back and placed in a temperature of 55° until numerous young shoots appear, and at this stage the old soil may be removed and the plants potted into a compost of turfy loam and leaf-soil, with a sprinkling of rough sand. Early struck cuttings may now be potted into 3-inch pots and plunged in bottom-heat. The syringe should be freely used and very little air given. Pot again as soon as the plants are ready, and place them in a temperature of 65°.

The Flower Garden.

Bedding Plants.—In the present month there is much to be done in the way of propagating bedding plants, both by seeds and cuttings. The stock of various plants, such as Coleus, Iresine, Lobelia and Ageratum, is easily increased by cuttings, which should be inserted in fine sandy soil as soon as possible. A gentle bottom-heat is a great advantage where large quantities are required. Seeds of many summer-flowering plants should be sown now, and these may include Godetia, Clarkia elegans, Nigella, Larkspurs and Antirrhinums for autumn flowering.

Plant Out autumn-raised Antirrhinums, Canterbury Bells and Sweet Williams in their flowering quarters. Gladiolus Childsii, G. gandavensis and G. brenchleyensis may also be planted now. If only for cutting, these bulbs should be planted on a border for the purpose, so that the flowers in more important situations may be left uncut.

Lawns.—During the present month it will be necessary to roll and sweep the lawns, trim the edgings and renovate the paths. Examine the drains so that the surface water may pass quickly away. All these things should be attended to as early in the month as possible.

The Rose Garden.—In sheltered situations some of the hardiest varieties may be pruned now, but in exposed positions they are better left for another ten days. In all cases the weak and unripe wood should be cut away, leaving only that which is strong and well matured. Unless it is necessary to increase the size of the plants, strong-growing varieties should be cut back to within five or six eyes of the base, while the weaker-growing kinds may be pruned closer, and always to an eye pointing outward.

The Kitchen Garden.

Tomatoes.—A sowing should be made now to produce plants for cultivation in the open garden. Dickson's Open Air is one of the best for this purpose.

Parsnips.—The roots of last season's crop should be lifted at once and placed in some cool place where a covering of soil or ashes can be applied to keep them in plump condition. The ground ought then to be dug, and, if necessary, a dressing of manure should be given. This ground may afterwards be occupied by late Cauliflower or Broccoli. If not already done, the Parsnips should be sown on ground which has been deeply dug or trenched for the purpose. There should be no delay in sowing the main crop of Onions. Carrots may also be sown now on well-prepared soil, and should be ready for use in June.

Beet.—If a warm south border is available, a sowing of Turnip-rooted Beet may be made now, and again in a fortnight's time. This should be ready for use in June, when young roots will be appreciated.

Peas.—A good sowing of Peas may be made now in the open garden for use about the end of June. As soon as the young plants are through the soil, they may be carefully earthed-up and the stakes placed in position. The Pea has many enemies, which must be carefully guarded against. The Pilot, Early Giant and Gradus may all be sown now.

Carrots in Pits should now be ready to thin. Let this be done before the plants become drawn. Three inches should be allowed between the plants. Water the bed carefully as soon as thinning is finished, to settle the soil about the roots. Give air freely when the weather is favourable. Carrots which have been allowed to remain in the ground through the winter should now be lifted and placed behind a north wall, where a slight covering of soil or ashes should be provided to keep them in good condition.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Onions.—Any time after this date the general or main crop of Onions may be sown out of doors; this, of course, will entirely depend on the condition of the soil. If the ground was turned up before the winter, the soil will be well pulverised and in good condition to sow. From this sowing one does not expect to get very large specimens, nor are they desirable for keeping purposes; consequently it will not be necessary to work in any manure at this stage. One should always, however, give the ground a good dressing of soot. This will be found to be a splendid fertiliser, not only to assist growth, but as a preventive against the maggot. As soon as the Onions can be seen in the rows, the Dutch hoe should be kept going to keep down weeds and prevent the soil becoming hard.

Peas.—A sowing of an early variety might be made outside now, and for this select a warm border where the soil is inclined to be light. It is not necessary to have the ground so heavily manured as one would have it for maincrop varieties. As soon as the plants can be seen in the rows, give them a dusting of soot, which will ward off slugs and other pests. One usually finds that it is this early crop that suffers most from vermin.

Round or Summer Spinach.—A sowing of Spinach may also be made now. Do not sow between the rows of Peas, as is so often done. Unless space is very limited, I think this practice is to be condemned. This sowing should be made on a warm border, and, if thinned out, the plants will not be so liable to run to seed. Continue to make a sowing, say, every three weeks, which should give a constant supply.

Parsley.—As a rule, for early supplies of Parsley I prefer to make a sowing in boxes and plant out next month. Where this is not possible, a sowing may be made any time now. We usually grow our Parsley as an edging, and a very handsome edging it makes. Sow the seed sparingly and thin out the seedlings to at least 3 inches apart.

French Beans.—Heated pits or frames are usually fully occupied at this season, but if one can be spared, it will be wise to make a sowing of French Beans in it. This would prove a useful crop to follow plants grown in pots, and so keep up the supply of this fine vegetable.

The Flower Garden.

Pentstemons.—Those growing in frames will now be making growth, and as it is rather too early to transplant them in a sheltered border, I would advise pinching them now. This pinching is usually done after they have been transplanted, but I prefer doing it now, and they make very fine plants if treated in this way. Where one wishes to increase the stock of some good varieties, these tops can be rooted in the propagating-pit, and will make quite good plants by April. Pentstemons are becoming popular for massing in the flower garden, and they are very satisfactory plants for that purpose. They require no staking (always a consideration) and will last in bloom longer than most bedding subjects. The latest addition to this class is Mrs. Fred Fulford, glowing crimson-scarlet, possibly the finest of its colour in cultivation.

Violas that have been rooted in cold frames should now be placed in nursery lines at the foot of a wall or hedge, and so make room for other bedding plants that require to be hardened off.

Crataegus Pyracantha (the Fire Thorn).—For clothing a wall this is a plant that is not so frequently met with as it might be, considering its adaptability. It carries its orange scarlet berries throughout the winter, and these being decidedly bitter, birds seldom trouble it. This is an excellent plant for any wall, thriving equally well on the north and east, and where space is limited it will just suit it, as it fruits more freely when the roots are confined.

Tropæolum speciosum.—This is without doubt one of the prettiest of all climbers, alike for its elegant foliage as for its rich crimson flowers. It is very hard to establish in the warmer counties of the South, but no difficulty should be experienced in getting it established in the North. For some years past I have been successful in growing it on almost any aspect. I prefer to get the roots, or underground growths as they are called, in preference to plants that have started into growth. My practice is to take out a small trench at the foot of a wall or hedge, and into it put some leaf-soil; then lay out the roots horizontally and cover them over with some fine soil. On no account must they be disturbed after they have been planted.

Plants Under Glass.

Poinsettias.—These will now be out of bloom. They ought to be gradually dried off and, finally, water should be entirely withheld. When resting, care must be taken to store them where the temperature will not fall much below 50°. About the end of March or the beginning of April they may be partly cut back and placed in heat to produce cuttings. April or May will in most cases be quite soon enough to begin propagating.

Clivias (Imantophyllums).—These useful greenhouse plants are not now grown as extensively as they used to be, and yet I find they force readily. A few plants put into heat from time to time will produce fine spikes of pale red flowers, which will be much appreciated for decorating. Unlike most plants when forced, the colour seems to me to be intensified.

The Hardy Fruit Garden.

Gooseberries.—As I pointed out some time ago, there is not nearly enough attention paid to the pruning and training of the humble Gooseberry. Anyone seems experienced enough for this work. In many cases, when the pruning has been completed, the bushes resemble as much as possible a hedge that has been indifferently trimmed. Some years ago I was very much struck with a system of training Gooseberries I saw practised in a garden in Kent. Each bush was supported by a stake about four feet in length. To this stake the centre shoot was trained, which gave it the appearance of a pyramid. The wood in every part of the bush was thoroughly ripened, and the crop was one of the finest I have ever seen.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

DECORATIVE varieties are being cultivated more extensively every year because the blooms can be obtained by amateurs from August to Christmas without a great deal of labour and expense. New varieties must be purchased, and no enthusiast will hesitate in this matter; and even where there is a good stock of cuttings on the place itself, wise growers will occasionally renew it, or a part of it, from a fresh source.

Accommodation for Plants.—Now, amateurs, as a body, do not possess unlimited accommodation either in the garden itself or under glass, and, of course, they must grow plants accordingly. Even a dozen will afford many blooms in December and at Christmas-time. By judicious stopping, each specimen may be relied on to yield at least ten flowers, so from twelve plants more than one hundred fine blooms may be available, and as these flowers last fresh for quite a fortnight, a very nice display will be secured at a season when all kinds of flowers are scarce.

Propagate by Cuttings Now.—Those of early, medium and late varieties may be propagated now. Insert them singly in small pots or three in 3-inch ones; then, when rooted, they should be repotted in larger pots without being disturbed. In this way fine pots of plants, bearing at least two dozen blooms, will be available next autumn. Use a very sandy compost, but place a little well-rotted manure in the bottom of each pot before putting in the soil. Make use of a cold frame for striking the cuttings. They may be rooted in a frame on a greenhouse stage; but at this season the cuttings soon droop, on account of the heat and dry atmosphere, unless very carefully attended to. In the cold frame only a light shade will be needed when the sun's rays are strongest. The early varieties may be propagated in boxes instead of flower-pots, inserting them 2 inches apart each way. From the boxes, transplant the rooted cuttings to others a little deeper, and from these, in the early part of May, to their flowering quarters. When the plants are well rooted and about four inches high, stop them by pinching out the point. This operation will induce side shoots to grow, and usually the three top ones are the strongest and take the lead. Well, another stopping means an addition of six shoots, often nine, and so an amateur cultivator can readily see that, when finally disbudded, a dozen blooms at least are ensured. If not disbudded, each pot of plants presents in appearance a huge bouquet. In the matter of stopping, the late-flowering varieties should be dealt with first and the early ones last. Sometimes a natural break near the right time obviates the necessity for stopping.

Good Early Varieties.—Gertie (salmon pink), Hetmine (pure white), Elstob Yellow (better than Horace Martin), Diana (deep bronzy red), Harvest Home (red, tipped gold), La Somme (mauve pink), Normandie (blush pink), Provence (rose pink) and White Pet.

Medium.—White Quintus, Le Pactole (bronzy yellow), La Garonne (terra-cotta), October Gold (old gold), Source d'Or (orange red, tipped gold), Viviani Morel (blush mauve), William Turner (white, makes a fine specimen plant), Crimson Source d'Or, Countess (pure white), Cranford Yellow, Mrs. Luxford (Indian red) and Janet (reddish buff).

Late.—A. J. Balfour and Dr. Enguehard (two good pinks), Baldock's Crimson, December Gold, Mrs. J. Thompson (white), Western King (white), Nagoya (yellow), Embleme Poitevine (yellow) and Tuxedo (reddish bronze). Avon.

NURSERY NOTES.

NEW ROSES IN IRELAND.

IN July last I paid my second visit to the beautiful Emerald Isle, and as I know that so many readers of THE GARDEN are very much interested in all that pertains to our national flower, especially its novelties, I thought a few notes as to what I saw during my visit to the three famous nurseries at Portadown, Belmont and Newtownards would find a welcome in its pages. I have visited most of the leading establishments, both at home and abroad, where Rose hybridising is carried out extensively, but I think I should have to award the

had been budded or would be budded. At one time Mr. McGredy used to bud five or six each of every seedling he raised—a most prodigious undertaking—but now he is obliged to make selections and bud only the most promising. As it was, I saw one breadth of stocks containing some 30,000 that had been budded with selected seedlings, no sort in greater number than ten or twelve. What an interesting plot this will be this summer! Even while I was there, there were very many kinds that had started into growth, and I detected some rare gems, some nearly black, others of most wondrous shades. I have an invitation to go over and see this block in bloom this summer, and I only hope I am able to avail myself of it. Mr. McGredy is working on the right lines. He is providing us with rare colours of splendid vigour of growth.

We who had the handling of many thousands of plants last autumn know only too well of the great popularity of Lady Alice Stanley, Mrs. Wakefield Christie Miller, Mrs. Alfred Tate, Edward Mawley, Mrs. Herbert Stevens, Mrs.



FREESIA EXCELSIOR, A BEAUTIFUL NEW VARIETY SHOWN BY MESSRS. SUTTON AND SONS AT THE ROYAL HORTICULTURAL SOCIETY'S SHOW LAST WEEK. (See page 120.)

palm for this to Messrs. McGredy. No one could view that splendid house, some 90 feet long, full of plants, every one bearing huge seed-pods, without being impressed by the sight. The crosses made all seemed to have been effective, for the plants bore from three to six, and often more, grand hips, many of the size of small Pears. I was informed that Mr. McGredy had long been working with the old Tea-scented Roses. I could hardly name a variety but what he said was in that house to be used as a pollen parent chiefly. Can we not trace, now that we know, the influence of some of these old Tea Roses upon several of Mr. McGredy's seedlings? Surely Mrs. Herbert Stevens, in its almost horizontal and slender growths, has a large infusion of the old Niphetos. Comtesse de Nadaillac, Mme. de Watteville, Devonensis, Souvenir d'Elise Vardon and others were all in some way utilised and blended with the Hybrid Tea.

In another huge structure were to be seen thousands of the little seedlings, many of which

Amy Hammond and others. Next autumn I expect a great demand for Old Gold. It is typical of Mrs. Alfred Tate, only of a very intense old gold colouring. Something like 10,000 of this variety had been budded before my visit, and the same number each of Mrs. Charles E. Pearson, Mrs. Frederick Vanderbilt, Lady Mary Ward and Edith Part. This will give some idea of the estimation in which this year's novelties are valued by their raiser. I saw such a number of good things that I cannot possibly name them all.

One named after Mrs. W. D. Prior will be heard of in the future. It is a beautiful golden sort with very long buds. Duchess of Manchester is a fine Rose of tree flowering habit. I noted that it bore some resemblance in its flower to E. Vevrat Hermanos, that very vigorous but shy blooming climber, and I was informed that this Rose was its pollen parent. Colleen is a "great" Rose. Practically every flower comes perfect, and there is a distinct yellow base to its rich rose coloured

blossoms. The petals of this Rose are enormous. Mrs. C. E. Pearson will probably surpass Lyon Rose, and Lady Mary Ward, Mrs. F. Vanderbilt and Edith Part are all worthy additions. The latter is like a heavily shaded Mme. Abel Chatenay.

A beautiful golden seedling was far better than Mme. Ravary, as seen growing at Portadown, and no small attraction was its beautiful Beetroot-coloured foliage. Here also was a lovely scarlet better than Liberty. Iona Herdmann, Florence Forester, Mrs. Ricardo and Mrs. F. Dennison were all gems that we shall all be wanting when introduced. To view the stupendous number of seedlings, both here at Newtownards and Belmont, one could not help feeling that Rose-lovers are assured of novelties for many years to come. It is to be hoped that the special attention that will be directed to the production of fragrant novelties by the gift of a beautiful challenge cup by Messrs. Clay and Son will induce raisers to strain every effort towards this end. I feel certain that if raisers would refrain for a time from intercrossing so many of the scentless Hybrid Teas, but rather utilise the Damask and Hybrid Perpetuals as pollen parents, at least we should have more fragrant novelties. I fear that this quality enters very little into the estimation of a new Rose on the part of the judges who award the gold medals, but I am also certain that if we could obtain a jury from the general public, this quality would not be ignored.

From Portadown I journeyed to Belmont, and met with a most hearty welcome from Messrs. Hugh Dickson. It is always a pleasure to go to Belmont. Both of the brothers who control this huge business are filled with enthusiasm for the production of novelties of merit. Mr. Hugh Dickson, who carries out the hybridising, sets himself a very high standard, so much so that novelties I thought splendid did not attain to his ideal. This is as it should be, and certainly we are sure of having good introductions from such a source. (In my notes the word "glorified" occurs very frequently.) One is a glorified Mme. Abel Chatenay, another a glorified Mme. Segond Weber, another a glorified Mrs. Foley Hobbs, and so on. Perhaps one of the greatest novelties I saw was Gorgeous. I started putting three crosses to certain kinds, but found very soon I had to increase them to four, and then to six in the case of Gorgeous. There is a blending of amber, crushed Strawberry, with tips of ivory white. Mrs. John Jamieson is a splendidly built Rose; Archie Gray may take the challenge cup, for its scent is delicious; Mrs. R. J. McMordie has huge flowers of a most lovely shade; Mrs. Willie Dickson is the glorified Chatenay; Mrs. Hugh Dickson is one of the "great" Roses, and is it any wonder that every bud was being worked of it? Countess Clanwilliam is considered by the firm as one of the very best productions, and is a glorified Luciole. Duchess of Buccleuch, ivory and cream, tipped pink; Ulster Gem, a splendid addition to single Roses, the first real yellow variety; Mrs. J. W. Parker will completely rival Bessie Brown; and I shall not be surprised to find it at the head of Mr. Mawley's Analysis of show Roses very soon. Charming is well named, and will be a formidable rival to Mrs. A. R. Waddell. Brilliant is also well named; it is of the colour of Pelargonium Paul Crampel, and one can imagine what a bed of this Rose will be like. Muriel Dickson has Pernetiana blood in it; one can see this at a glance. I cannot describe its shade of colour, neither do I think an artist could paint it.

These are but a few of the beautiful novelties in store for us at Belmont. I only wish we did not

need to wait four or five years for some of them; but when a new Rose is produced it takes quite a long time to raise up a stock equal to the demand. I certainly think something should be done to secure to our raisers a sort of copyright in their productions; but how it is to be done has hitherto baffled all who have tried to solve the difficulty. We heard from the Rev. J. H. Pemberton at the National Rose Society's annual meeting that the raising of new Roses did not pay, and I believe the large raiser would endorse this statement. The public should, therefore, if they wish for good novelties, do all in their power to support the industry. I must defer giving an account of my visit to Newtownards for another article. DANECROFT.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment is desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowerin9 shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

INJURY TO VIOLETS (Trent).—The fungus Botrytis cinerea is attacking the foliage of the Violets sent. It is one likely to be troublesome if the plants are at all close, and even when they grow vigorously they are apt to become victims of this fungus attack unless every precaution is taken to maintain a free circulation of air around and between the plants.

MAKING A WALL GARDEN (Yorks).—We are obliged by your letter. The whole question of a "few inches" or a "few feet" of concrete or stone resolves itself into one of circumstance, and frequently, as we know full well, stone is scarce, while suitable material for concrete is more generally available. A wall 20 feet high constructed of a "few feet" thick of rock with a good batter should be as solid as the rock itself. In some localities, however, the cost of so much stone would be prohibitive. Wall gardening presents so many phases that we hope in the near future to deal with it in a short series of articles, and to show by illustration and text what is possible in varying circumstances.

PLANTS TO SUCCEED DELPHINIUM (E. H. S. E.).—The Aconitum would certainly be good as a succession, but it comes late and is tall growing. A much better way of filling the gap would be by planting indiscriminately clumps of the pure white Madonna Lily, which flower in mid-July at 3 feet or 4 feet high, to be followed some weeks later by the spreading plants of Aster Amellus, which take up so little room at other seasons. The Aster is about two feet high, the colour violet or some shade of purple. It is a good plant and a wonderful bloomer. Aster diffusus horizontalis and A. ericoides Desire, reddish and white respectively, would be equally good and free-flowering. These latter are about three feet in height.

FLOWERS FOR CUTTING (Nemo).—In the 4-foot-wide bed at the house end of the lawn you could not do better than plant Sweet Peas, which are both useful for cutting and profuse in flowering. Of these you might plant circular groups, as shown in a recent issue of THE GARDEN, selecting the colours to your liking. With these might be interspersed the pink Ivy-leaved Pelargonium Mme. Crousse and white Marguerite Mrs. F. Sander, and with a margin of Godetia a gay border would result for a long time. For the narrower side borders you might have Cornflowers, Sweet Sultans, Gaillardias, Stocks, China Asters in variety and Carnations. In the 11-foot-long bed, Heliotrope pegged down, with a margin of white Alyssum, would do quite well, and in that at the back Iris pallida, I. Mme. Chereau, I. Mrs. C. Darwin, Montbretias, Phlox Mrs. Jenkins, Gaillardias, Columbinas, Aster Amellus, A. ericoides Desire, A. cordifolius, A. Beauty of Colwall, Rudbeckia Newmanii, Trollius Orange Globe, Helonium pumilum, and single and double flowered Pyrethrums. These latter are perennial, and well suited to your requirements.

BORDERS FOR PERENNIALS (Bullion).—It is not quite clear from your letter whether you require perennials for the whole of the borders around the lawn. We note you have Apple trees apparently in the centre of the north border and Poplars—these presumably near the wall on the south side. Not many plants would succeed near these latter. Other drawbacks to success, if we rightly interpret your figures, are the 20-foot-high walls at east and west, though this might not be serious if, in planting, you keep the subjects 2 feet or 3 feet from the walls. For the east end border you might arrange Hollyhocks, Delphiniums in variety, Sunflowers, tall Michaelmas Daisies, white and rose perennial Pea, Helonium Riverton Beauty and other such plants in the back row, setting out three or more of each to form effective groups. In the next line, which should be at least 2 feet from the first, arrange Anemone japonica, A. j. alba, A. j. rosea, Phloxes Mrs. E. H. Jenkins, Iris, Coquelicot, Countess of Ilchester, Lady Mary Hope, Regulus, Selma and Queen Alexandra, together with Iris pallida dalmatica, I. Mme. Chereau, I. Dr. Bernice, I. Darius and I. Mrs. C. Darwin. These may be alternated the one with the other, and by introducing Lilium croceum, L. candidum, L. speciosum and others among them obtain greater variety. In the front line, single and double Pyrethrums, Aster Amellus, A. acris, Helonium pumilum, Trollius Orange Globe, Iris Victoriae, Phlox Tapis Blanc, Campanula carpatica alba, C. Moerheimii, C. glomerata speciosa and Clove Carnations might appear; while, if room still remained at the margin, Pinks, dwarf Campanulas, Aubrietias and Mossy Saxifrages should be planted. The dry raised border at the opposite end, if deeply trenched and heavily manured, would grow Irises of several sections quite well, or you might make it gay with Carnations, Snapdragon, Pentstemons and other plants in variety. The Spanish Irises would prove most useful in such a case.

ROSE GARDEN.

ROOTED BRIAR CUTTINGS (D. D. F., Kelso).—We fear you will have some difficulty in purchasing these, as Rose-growers, as a rule, do not grow them for sale. Try your local Rose-grower, or, perhaps, Messrs. Cocker and Sons, Aberdeen.

ROSE CLIMBING MME. MELANIE SOUPERT (Annie Laurie).—We think any of the nurserymen who advertise Roses in our columns could supply you with this, even if they do not list it. If not, and you will send your full name and address, we will communicate with you by post.

CLIMBING ROSES IN GREENHOUSE (Westbank).—The side shoots, or laterals, of Climbing Caroline Testout and Climbing Liberty should be cut back hard at once, say, to one or two eyes each. If the plants were pot-grown, they should flower well; but if they were from the open ground and planted in the border last October, you must not expect much bloom this season.

REARRANGING A ROSE GARDEN (C. E.).—We have much pleasure in advising you upon rearranging your Rose garden, and as it is impossible to deal fully with it in THE GARDEN, we have forwarded a sketch by post, indicating therein the proposed alterations. We quite agree with you as to the spotty effect as at present arranged, and we have noticed many gardens sadly marred by this apparent careless grouping of colours. You must discard entirely Reine Marie Henriette, as it is too vigorous for bedding. W. A. Richardson is hardly the kind for your purpose, as its growth would not harmonise with the other beds unless you peg it down. We have suggested the best kinds, according to your wishes. Should you wish to keep one variety to a bed, you would, of course, use that variety you now possess.

PRUNING CONRAD F. MEYER (Howden).—When this grand Rose is grown in clumps, much of its beauty is lost if allowed to grow away as a free bush. If only one plant in a clump, the variety might very well be allowed to grow almost naturally, as in time its growth would arch over like a wild Rose of the hedgerows. In your case we would advise cutting out some of the oldest wood quite close to the ground, and the ripened young growths retain some 3 feet long, others 4 feet, and one or two 5 feet. Do not encourage too dense a growth. If the plants are fairly close in the bed, you could retain about four growths per plant; the blooms would be all the finer for this thinning. Be sure to feed the plants well, and, if you do this, you will obtain splendid blooms almost exhibition size. A clump or two of the white sport, Nova Zembla, would be a welcome addition, as its snow white, fragrant blooms are always welcome.

THE GARDEN.

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NOTES OF THE WEEK.

Writing for Catalogues.—It has come to our knowledge that a good many people, when writing seed or plant catalogues, place their letters in unsealed envelopes and stamp these with only a halfpenny stamp. Under the Post Office Regulations this is not permissible, and letters sent that way are surcharged one penny on delivery. It is a serious item to nurserymen and seedsmen, and those who apply for catalogues should either use post-cards or penny stamps.

A Beautiful Early Flowering Shrub.—Although *Protea persica* was introduced into this country as far back as 1848, it is seldom found in gardens. It is a very attractive plant in February, when whole branches are often properly furnished with flowers, the crimson-tipped stamens of the male blossoms being singularly beautiful and uncommon. Though perfectly hardy, it benefits if sheltered from the cold winds by other trees. Apart from its attraction at the season of the year, it is one of the most handsome of foliage plants during the autumn.

Small Daffodils for the Rockery.—Both *Narcissus minimus* and *N. lobularis* are excellent subjects for the rock garden. They flower early in the year, and when bright colour is wanted, neither of them is fastidious about soil, provided that it is light and well drained. *N. minimus* is the smallest Daffodil there is, and one of the first to flower. In the Midlands it can be seen to bloom this year about the middle of February in sheltered places, while in the South of England it is considerably earlier. *N. lobularis* follows it with about ten days' interval. It is quite twice the size of *N. minimus*, and is of such a self colour, the perianth being a much deeper yellow than its trumpet. When once established, both will take care of themselves.

Pruning Ivy.—Few plants are so generally noticeable as varieties of Ivy, either for clothing a wall, hiding unsightly objects, or for covering the places under trees. Ivies may be planted in pots, and if established plants in pots can be used, so much the better, as they go straight to work without any check. There are a number of beautiful varieties to select from, and although the large-leaved Ivies grow quickly, the smaller-leaved varieties are preferred for most purposes. To keep Ivy bright, it should be cut over once a

year to remove the old leaves. This is best done now, for although Ivy can be cut at almost any time during the winter, by leaving it until now it soon becomes furnished with its new leaves, and therefore does not remain bare for long.

A Giant Groundsel.—Few plants can be more effective at the present time than *Senecio grandiflorus*, with its large, handsome leafage and noble stature, the growth of which sometimes reaches to a height of 10 feet and terminates with a huge, flat corymb of yellow flowers from 1 foot to 2 feet across. The species is a native of Mexico, and, to secure good specimens for the coming season, seeds should be sown at once. It is a very striking plant for the subtropical garden, and if



TRITELEIA OR BRODIEA UNIFLORA, ONE OF THE EARLIEST BULBS TO FLOWER IN SPRING.

the flowering period is not reached in the open, the plant may be lifted and potted for decorating the conservatory in the winter.

A Beautiful Camellia.—Anyone who is familiar with the large plant of this Chinese species growing in the Temperate House at Kew cannot fail to have been impressed by its magnificent flowers when at their best during February or early March, for they are quite distinct from, and appeal to the decorator more than, the formal flowers of many of the varieties of *C. japonica*. The bright red flowers are semi-double, with large, irregular-shaped petals and a central mass of golden stamens, individual blossoms being from 5 inches to 6 inches across, with a resemblance to those of a semi-double *Pæony*.

The Spring Starflower (*Triteleia uniflora*).—This beautiful bulbous plant, native of Buenos Aires, is now flowering in many gardens throughout this country. At Wisley it has made a bright display for the past week or two, where it rejoices in a sandy soil and sunny position. The flowers are about six inches high and pale lilac in colour. Like many other garden plants, the Spring Starflower has the misfortune to bear a number of scientific names, having been placed in three genera, viz., *Triteleia*, *Brodiaea* and *Milla*.

An Early Daffodil.—The earliest of the large-flowered Daffodils to open with us outdoors this year was *Narcissus pallidus præcox*, the first blooms unfolding on Friday, the 6th inst. This is a very dainty Daffodil, and one that ought to be more extensively cultivated. Unfortunately, it has the undesirable trait of dying out in many places, and fresh bulbs have to be planted every two or three years. But for its earliness alone it is well worth the expense and trouble, and in a few gardens it thrives and increases. We have it nestling under the wall of the house, by the front door, the aspect being due south. These early spring flowers seem to appreciate close association with the dwelling-house, though, a grass-carpeted copse would provide a more natural setting.

Coloured Freesias.—We lately saw a good pot of *Le Phare*, which is one of the brightest of the new coloured race that have been sent out in recent years by the firm of Van Tubergen, jun., of Haarlem. It is of a deep rose colour, the individual blooms on the small side, but to make up for this deficiency it is a very free bloomer and deliciously scented. The price of this and all the others is high, but we are told by those who have grown them that they are just as easy to manage as either *F. refracta alba* or *Leichtlini*. There is no difficulty in working up a little stock, if the bulbs are looked after when they have done flowering. They want feeding with some fertiliser until the leaves begin to turn yellow, when water must be gradually withheld and the bulbs thoroughly ripened by the pots being turned on their sides and put in a warm, sunny place out of the reach of wet, until they are shaken out and graded at planting-time in August.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hardiness of *Spiræa lindleyana*.—In a recent issue I saw it stated that *Spiræa lindleyana* can be only "recommended with safety for Southern gardens." I have a very fine specimen, of which I enclose a photograph, in my Yorkshire garden, 500 feet above the sea-level, on the north side of my house. The photograph was taken on August 26. The largest stump measured 16 inches in circumference, and the largest living branch 12 inches. This shrub was an offset from a plant growing in a small garden in Richmond, Yorks, which was given me quite forty years ago. I have been told since that it was not known in England so long ago. My impression is that it was sent to my friend from South America. I have given away many offsets of this Yorkshire

Sherborne House, Northleach, R.S.O. [We thank Lord Sherborne for his interesting letter, and should be pleased to hear from any other readers who have found this charming little Heath thrive in limestone soil.—ED.]

Saxifraga burseriana and Its Varieties.—In your issue of last week "Alpinist" states on page 114 that he doubts if *Saxifraga burseriana* and its varieties *Gloria* and *major* can be distinguished when grown under similar conditions. My little experience with them has shown *S. b. Gloria* to be totally distinct from the type; indeed, for gardening purposes it might even be a distinct species. I have one clump of the type and one of *S. b. Gloria* growing side by side in the same pocket of my rock garden. Each clump measures about eight inches in diameter. On February 13 the type began to open its beautiful snow white flowers, fifteen in all. *S. b. Gloria* did not begin to flower until February 24, just as the type was going over. No fewer than thirty-seven strong

how such a specimen was obtained. I would dispel any doubts upon the quantity of flowers the plant carried. The plant was shown in an 8-inch pan, 6 inches deep, with 354 perfectly developed flowers. There were other inferior buds setting in the crowns of the plants which were not in flower at the time of exhibiting, making a total of about three hundred and seventy. These later buds have come into flower since; the majority of the 350 have gone over or faded. I counted the flowers before exhibiting, and had two witnesses to observe that the number was correct. The method of cultivation is simple. The pans are well drained with potsherds and red brick, broken up. A layer of turfy material is placed over the crocks, and sandstone 2 inches thick and 4 inches deep is set upon the turfy material and allowed to keep above the soil, which should be pressed firmly between the sandstone when potting or placing them in the pans from pots or division. The soil consists of a small quantity of loam, and this binds the compost together as it is mounded above the level of the rim of the pan. A slightly larger quantity of finely sifted leaf-soil than the loam is added, with, also, coarse sand, sifted coke-ashes and old mortar rubble. These ingredients are well mixed together. A very important matter is the site for *S. burseriana* and its allies. Our method is to plunge them in a bed of coke-ashes after they have done flowering, and start them into growth in early May, out in the open in the brightest light possible, keeping them well watered through the summer months. In October the plants are transferred to cold frames and plunged in ashes, with air admitted continuously night and day. The plants are never shaded, either while in flower or out, not even if division has taken place. This type of *Saxifraga* must not suffer from drought at any time, and while in bud search must be made for green fly in the axils of the crowns of the plants, for the insects transport themselves to the flowers, which will not open if infested. We pick them out with small tweezers in the early stage if a plant contains the pest.—M. E. MILLS, *The Gardens, Coombe House, Croydon, Surrey.*

Peat Moss Manure for Rhododendrons.—I am reading the symposium appearing in THE GARDEN upon the subject of peat moss manure with interest, especially as I am making a bed for Rhododendrons and thought of using it. One of the contributors spoke of having used it for that class of plant, so I wrote him for further information, and received the enclosed reply, which perhaps may prove of interest to readers of THE GARDEN. ["I have generally used it with about one-fourth of its own bulk of sea-sand, of which we can easily get an abundance, being on the shore of the Firth of Forth. I have, however, used it with good effect neat, and always almost fresh from the stables. I have been particularly struck in one instance as to its utility in the latter form. When I took charge of the gardens here, thirty-two years ago, I found what was evidently from its foliage (there was no flower) a good variety of a hybrid Rhododendron in the last stages of decay, under a thicket of trees. I had it removed to an open situation, where I planted it with an abundance of pure moss litter fresh from the stables; it gradually began to resuscitate, and for many years it has been an object of great beauty (its quality being all I had anticipated), and at the present time it is smothered with swelling flower-buds. I have no doubt you would find it equally useful mixed with good fibrous loam.—CHAS. COMFORT."].—HUBERT BENSTED.



A FINE PLANT OF SPIRÆA LINDLEYANA IN A YORKSHIRE GARDEN. THIS SHRUB IS GENERALLY CONSIDERED HARDY ONLY IN SOUTHERN COUNTIES.

specimen, and have now a good plant in my garden in Bucks.—HEDGERLEY.

—The note by Mr. Loudon of South Woodford in February 28 issue, page 102, was of interest to me. We have three plants of the same shrub here. They are on heavy soil and absolutely exposed to the north, yet they flower in profusion, and have been greatly admired. At present they are again very promising.—J. F. ROUGHT, *Buckland, Berks.*

Erica carnea in Limestone Soil.—Surely the little pink Heath which is now flowering so abundantly here is *Erica carnea*? Yet I see that a writer in your issue of February 28, page 102, says that *E. carnea* "spreads rapidly in a sandy peat soil, or it may readily be grown in a loamy soil if there is no lime present." The garden here is situated in the middle of the Cotswolds, and the soil is nothing but a limestone soil, yet *Erica carnea* spreads rapidly and flowers abundantly, and I have always looked upon it as the one Heath which would flourish on limestone.—SHERBORNE.

flower-stems were produced, each bearing a magnificent flower fully twice the size of the type. The entire plant seems smothered with blossom still. The petals appear to be of stronger texture than in the type, and as the flower-stalks are quite 2 inches long, they are not so easily soiled. As they come into bloom I protect them with a pane of glass overhead, and also have to surround them with a perforated zinc ring to keep slugs from eating the flowers. My plants are growing in very gritty loam facing south-east, but receive a little shade from the east from a plant of *Hypericum olympicum* in an adjoining pocket. They are watered copiously in dry, hot weather, and seem to thrive well under these conditions.—NORMAN G. HADDEN, *St. Audreys, Malvern.*

—Reference has been made by "Alpinist" in your issue of March 7 to the *Saxifraga burseriana grandiflora* exhibited by Mr. Frank Lloyd of Croydon and illustrated on page 116 of that issue. The writer stated that it would be interesting to hear what the cultivator had to say upon

Peat Moss Litter Manure : Is it Injurious ?—I have used a great deal of peat moss litter manure, and have a high opinion of its manurial qualities. I find it especially good for digging into flower beds and borders, where it would not be wise to use strong farmyard manure, which would cause the plants to make foliage at the expense of flowers. Where one has difficulty in growing carrots, it may be applied as a top-dressing just after they have been thinned. This will prevent an attack of Carrot fly, for it is well known that any evil-smelling substance is repugnant to this pest. As a top-dressing to inside Vine borders it is invaluable, as it tends to keep the roots near the surface, a point always to be aimed at. On the whole, however, I consider that for general purposes it is not superior to well-made farmyard manure; nevertheless, I consider it an excellent substitute.—JOHN HIGHGATE, *Hopetoun Gardens, South Queensferry, N.B.*

— I have not had much experience with peat moss litter, for the reason that I would not have it in the garden. I do not think this is altogether prejudice, for what little I have had dug into the ground never appeared to me to incorporate itself with the soil, but would turn up again at a later digging without, apparently, having imparted much virtue to the soil. In my opinion, straw manure, well rotted, is infinitely superior as a manure.—ARTHUR CULLOCK, *The Gardens, Copped Hall, Epping.*

— My experience with this manure has been far from satisfactory. Some years since I used it in a trench for growing Leeks. The manure was rather fresh. Possibly a month had elapsed from the time of planting before any bad result was noticed. Then gradually the young plants died off. The shortage of good stable manure is a serious drawback in many gardens. When purchasing manure, one has to be very careful, and the loads as they arrive should be examined. Savings from joiners' shops, and even sawdust, are used in many stables as bedding, and, needless to say, the manure from these materials is injurious to plant-life. Sweepings from the streets are so dangerous, that is, from streets where preparations containing tar or other poisonous substances are used upon the surface. I notice in a recent issue of a contemporary that Mr. W. Crump, the well-known gardener at Madresfield Court, writes: "Do not use fresh manure, especially if the animals have been littered with peat moss."—C. R.

Hardy Cyclamen.—These flower both in winter and early autumn, though perhaps the winter-flowering kinds, veritable harbingers of spring, they undoubtedly are, receive the greater welcome because of that fact. This year, chiefly because of the exceeding mildness of the season, they are earlier than usual, as witness the fine displays that were forthcoming at both the January meetings of the Royal Horticultural Society. These, doubtless, had received frame protection—they certainly afforded no proof of having been rewarded in heat—though, even so, their flowering was abnormally early. Thus grown they make lovely pictures in the alpine-house, and even though quite miniature as compared with the plants of the Persian race, they are none the less welcome, certainly none the less beautiful or charming. Not less pretty—decidedly more natural—are they when seen carpeting the ground in sheltered woodland places, where, nestling in the scant grass or herbage of the time in sweet communion with all around, they brave the

hardships of the weather, and, protected by their carpeting leaves, remain fresh and bright for many days.—E. H. J.

The Yellow Snowdrops.—The Snowdrops with yellow instead of green markings are in full bloom at present, and are much more charming than many who consider such flowers as freaks would suppose. I have the single lutescens and flavescens, with the double one, and one or two others. They are very beautiful, although this is not said in any mood of depreciation of the common Snowdrop with its exquisite green markings.—S. ARNOTT.

Rhododendron moupinense.—The illustration of this Rhododendron in THE GARDEN for February 21, page 98, gives an excellent idea of an attractive little plant which, when available, will be a welcome addition to the small-leaved, dwarf Rhododendrons suitable for the rock garden. The plant shown at Vincent Square was raised at Warley from seed sent from Western China by Mr. E. H. Wilson when collecting for the Arnold Arboretum. It flowers the third year from seed, and has proved itself to be perfectly hardy during its five years' experience in the open at Warley.—E. WILLMOTT.

Sowing Hollyhock Seed.—In reference to your note upon this subject on page 89, February 21 issue, it may interest your readers to know that the noted growers, Messrs. James Vert and Sons of Saffron Walden, Essex, raise very large quantities of plants annually from seed sown in the open ground in May. Plants raised at this time become strong and sturdy enough to stand throughout the winter. To this firm, who have made a careful study of the Hollyhock for many years, we are indebted for the introduction of many beautiful varieties, and their annual exhibits at the Royal Horticultural Hall, and also at Shrewsbury, are always a source of pleasure to florists. In order to check the spread of disease, which is such a serious drawback to the cultivation of these noble plants, the above firm have prepared a specific, in powder form, which has proved a boon to growers.—COLIN RUSE, *Folly Farm Gardens, Sulhamstead, near Reading.*

The Hailshamerry.—A paragraph in THE GARDEN for February 28 on autumn-fruiting Raspberries reminds me that I have never publicly acknowledged, as I intended to do, my deep debt of gratitude to the Hailshamerry for having supplied me with fruit for delicious little pies or tarts last year right on from September to early December. These, by the way, were always made *à la* the small pork or veal pies that one gets at the refreshment rooms of our railway stations. Made in this way, I always think the flavour is better than when the fruit is put into an ordinary dish and cooked in the usual way. The aroma when the crust is broken down is a veritable appetiser for the delicious mouthful that will follow. To start with I had only four or five plants, which in the course of two years have become joined into a line at the foot of a south wall. I cut out all the old wood and prune any shoots likely to bloom before the autumn. Nature does the rest. The berries are acid in flavour, and I find birds leave them severely alone. In appearance they are like fat Raspberries, and the fruits, once formed, go on ripening in most unpropitious weather. I cannot say that the plant is *very* free-fruiting, but there is not much to complain about, and very likely with better treatment than I have given it this might be entirely overcome. I always say that if for any reason I only grew one kind of fruit in my garden, that fruit would be the Rasp-

berry. In jam and jelly, in sauce and salad (alone, with a suspicion of maraschino), in plantation and pie, it is unsurpassed. My grateful respects to the Hailshamerry for the long-drawn-out season that it gives us.—JOSEPH JACOB.

Two Fine Dwarf Lobelias.—Although formal bedding is not now much favoured, there is still room in most flower gardens for a really good Lobelia. For the last seven or eight years I have grown Waverley Blue, and nowhere have I seen anything finer. It is a true blue in shade, the blooms being large and very freely produced. As a bedder it leaves little to be desired, and for pot work far surpasses anything I have ever tried. Under glass, of course, it is a little paler in colour; but it blooms for four or five months on end, and never gets straggly. This variety also keeps well during the winter under ordinary treatment. The other variety I favour is named Halley's Blue; it is several shades darker than the first named, and has a very slight tinge of purple. It is later in blooming, too, than Waverley Blue, but continues right on till frost cuts it down. It is dwarf and very floriferous, but not very good under glass.—C. BLAIR, *Preston House Gardens, Linlithgow.*

MY GARDEN BEAUTIFUL.

I know a garden beautiful,
All filled with rare delight;
No fairer feast of bud and bloom
Sure ever met the sight;
And when a myriad smiling lips
Receive the sunbeams' kiss,
A song of such sweet rapture floats
And trembles into bliss.

Far from the World's unresting ways
My footsteps love to stray,
Unto this garden of delight
Where cooling fountains play;
To rest my tired heart, and feel
Sweet wooing whispers bless,—
The tender eloquence of winds
That sigh their soft caress.

Adown each fragrant winding path
Ah me, what healing blows!
What peace outbreathes from shapely forms
Where Love has lent repose;
The vision of all tints—how fair!
How fair each shining cup!
Dew-filled with glint of diamond,
Where thirsty bird may sup.

And in this paradise of flowers,
The warbling never dies!
It wakes the morn, it lulls at eve,
It closes beauty's eyes;
And as I seek it ever here,
The bloom Heartsease is found;
And so my Garden Beautiful
To me is holy ground.

FRANCES HANDLEY.

FORTHCOMING EVENTS.

March 17.—Broughty Ferry Horticultural Association's Meeting.

March 18.—Stevenage and District Horticultural Society's Spring Show.

March 19.—Linnean Society's Meeting. Royal Society of Arts Meeting: Paper by Mrs. Villiers-Stuart on "Indian Water Gardens." Exhibition of Spring Flowers at Brighton.

PERENNIALS FOR SPRING PLANTING.

It is generally conceded, I think, that for the vast majority of herbaceous perennials and the greatest variety of soils there is no season of the year more suitable for planting than that of early spring. It is as true of the seedling as it is of the more established example, and equally so of that older type of the last named, for which division of the rootstock in conjunction with transplanting are essential if the plant is to give of its best. It is true, too, from the propagator's point of view, inasmuch as it is at that season of the year that the majority of herbaceous perennials, starting root and branch anew, also develop, if opportunity is afforded for so doing, a proportionate number of the latent eyes or buds which may be found about the bases of the stems, it may be of Torch Lily, Tufted Pansy, Delphinium, Michaelmas Daisy, Pyrethrum or many another besides. Left to themselves in undivided clumps, these same buds are either crowded out of existence altogether or go to swell that little forest of weakly growths more common, happily, in clumps of herbaceous border plants a decade or two ago than they are to-day. Thus it would appear that cultivators generally are moving in a right direction, and that amateurs, realising how to make the most of things, are also prepared to cultivate their border flowers on more rational lines than hitherto. In former times it was no uncommon thing to see great mat-like swards of the Michaelmas Daisy occupying a border, the nearly bare stems and inadequate floral display but the net result of starvation—the exacting toll of neglect. To-day we know that these same plants merit annual or biennial division and transplanting, giving, some thirty, some fifty, some a hundred fold of their flowers, as the result of the cultivation bestowed. In principle the same is true of other plants—Phlox, Sunflower, Helenium, Campanula, Day Lily and the like—and the measure of their success at flowering-time will be also that of the cultivation—or lack of it—they receive; hence the desire for timely action.

Preparing the Border.—At all times a well-prepared border is essential to success. Such preparation is more easy of accomplishment in the case of a new border where trenching and manuring can be done in advance, and without such hindrance or interruption as is inseparable from a border not destined for complete overhauling. So much, however, might be advanced in favour of the latter, and so good the results, that in all cases where possible it is worth pursuing. All the same, there are many things—Phlox, Pyrethrum, Potentilla, Japanese Anemone, Delphinium, Day Lily and Pæony, to name but a

few—that are infinitely better if left for two, three, or even a greater number of years, and to these the importance of a well-prepared border at the outset cannot well be overestimated. In the case of heavy soils, the addition of grit and leaf-soil will assist drainage, just as a free addition of lime will assist porosity and do other important work. For light soils the manure should be introduced low down, where later it may play the part of a cool retreat—a sponge—for the roots in the event of dry weather.

The Big Clump Fallacy.—Elsewhere I have written of the “Fallacy of the big clump,” and it is worth repeating here. In short, the big clump of Pæony, Michaelmas Daisy, Lenten or Christmas Rose, Iris, Pyrethrum, or what you

forks are infinitely more safe, in that either can be directed to any point of the plant's anatomy at the will of the operator. In this way solid clumps—Trollius or Pyrethrum—first bereft of soil by washing or otherwise, can be reduced to quite small divisions with impunity. So, too, can larger-growing subjects, as Iris lœvigata and others. In the case of Flag Irises, all that the planter has need of is the most recently formed rhizome with its growing crown attached. The Michaelmas Daisies of the Novi-Belgii set separate readily with the hand, while those of the Novæ-Angliæ group, being more woody, are best wrenched asunder by means of hand-forks. On the other hand, the closer-growing rootstocks of such as ericoides and cordifolius submit to careful division with a knife, and many other instances might be given. The whole object of division is reinvigoration, and the most youthful pieces—the fittest—are all the gardener need bother about, planting these with a free hand in groups to give immediate effect.

Some Useful Plants for Cutting.—There is ever a demand for flowers in the cut state, and the following is a selection: Single Pyrethrums Hamlet (pink) and James Kelway (crimson); double, Ne Plus Ultra (pale pink), Aphrodite (white) and Pericles (yellow); Asters Amellus, ericoides Desire, cordifolius in variety and Beauty of Colwall; Irises pallida, aurea, Mrs. Darwin and Dr. Bernice; Galegas in white and mauve, white Everlasting Pea, Gaillardias, double and single flowered Gypsophila paniculata, Aquilegia chrysantha, Alstroemeria aurantiaca, Campanula persicifolia in variety, Montbretias, Scabiosa caucasica, Lupines, Rudbeckias and Heleniums. E. H. JENKINS.

VIOLETTAS. (MINIATURE-FLOWERED VIOLAS.)

It is many years since the late Dr. Charles Stuart, M.D., of Chirnside, Berwickshire, succeeded in raising the first of this beautiful race of hardy plants. From quite reliable information it appears that this enthusiastic botanist and florist began his original work so early as

the year 1874. In that year he took pollen from a garden Pansy named Blue King, a well-known bedding variety at that period, and applied it to the pistil of Viola cornuta, a Pyrenean species. The cross was quite successful, and in due course a podful of seed subsequently produced twelve plants. When these plants came into flower, they were all blue in colour; but, what was most important, each plant had a good tufted habit. Subsequently, in later years, the flowers of the first cross were fertilised with pollen from a pink garden Pansy, and a measure of success attended this effort. The resulting seedlings gave flowers of more variety in colour and still the same very desirable tufted habit of growth, showing clearly the



A WELL-GROWN PLANT OF LUPINUS POLYPHYLLUS, A USEFUL PERENNIAL FOR CUTTING.

will, is to the planter a delusion and a snare; a youthful specimen is capable of much better work. The obvious reason of this is that the youthful plant has unlimited opportunities for development, while the big clump, with its score or so of crowns, can only develop a tithe of them and root fibres *pro rata*; hence the fallacy.

The Spade-Divided Clump is almost as bad as the last; plays “second fiddle” to it, in fact, in that it retains the feeble crowns of the plant, which, together with the woody portion inseparable therefrom, would be doing greater service for the garden by creating potash *à la bonfire*. Moreover, the spade as a tool for dividing plants is a cumbrous, oftentimes a dangerous thing. A strong pruning-knife or a couple of hand-

influence of *V. cornuta*. These plants were propagated and sent to the Royal Horticultural Society's Gardens at Chiswick for trial, where they gained no fewer than six first-class certificates at the hands of the floral committee, who recognised in the growth of these plants something entirely different from all that other growers had sent in for trial. At a later period Dr. Stuart, when looking through his seed-beds one day, espied what he had long been looking for, viz., a flower without rays in the centre, which was a pure white rayless self. This was in the year 1887—Queen Victoria's Jubilee. The plant was forthwith pulled to pieces, and, in the words of the raiser, "every bit propagated." A notable fact recorded at that period was that the blossoms were beautifully fragrant, and this is not the least of the attractive characteristics of these plants. The foregoing is a true history of the Violettas, the original of which was a more or less chance seedling, the result of a series of crosses that it is impossible to very definitely trace. There are persons who are disposed to question the origin of this charming type of these beautiful hardy flowers, in which attention is called to the fact that the original cross was made in 1874, and that "Violetta" did not appear until 1887—thirteen years after. Lovers of the hardy flower garden will always be indebted to the late

Dr. Stuart for what he did for the Violas and many other beautiful plants, such as the Polyanthuses and the Aquilegias. Between the year of the introduction of Violetta and the seasons of 1896 and 1897 Dr. Stuart raised several very beautiful additions to this new type, few of which, unfortunately, are to be found in the lists of the Viola specialists of to-day. The reason for this, I am disposed to believe, is largely due to the fact that comparatively few growers were prepared to give them their proper place in the garden. They could hardly be regarded as rivals to the large-flowered Violas that are now so extensively grown in all hardy flower gardens worthy of the name. A few sorts like the original variety are vigorous and spreading in their character of growth, and free-flowering withal. The majority, however, are less robust, yet sufficiently hardy to justify a position less trying than an ordinary open border or bed in exposed positions. A much better position for them was found in the rock garden, where slightly sheltered quarters could be afforded the plants during the heat of the midday sun in the



A YOUNG SEEDLING VIOLETTA OR MINIATURE PANSY.

height of the summer. Here they were found to luxuriate, making these quarters bright and beautiful with a profuse display, when so many other occupants of the rock garden had lost their beauty and interest. These plants usually come into flower in April, and continue to blossom quite freely until the early autumn. One of our greatest authorities on hardy flowers, to whom

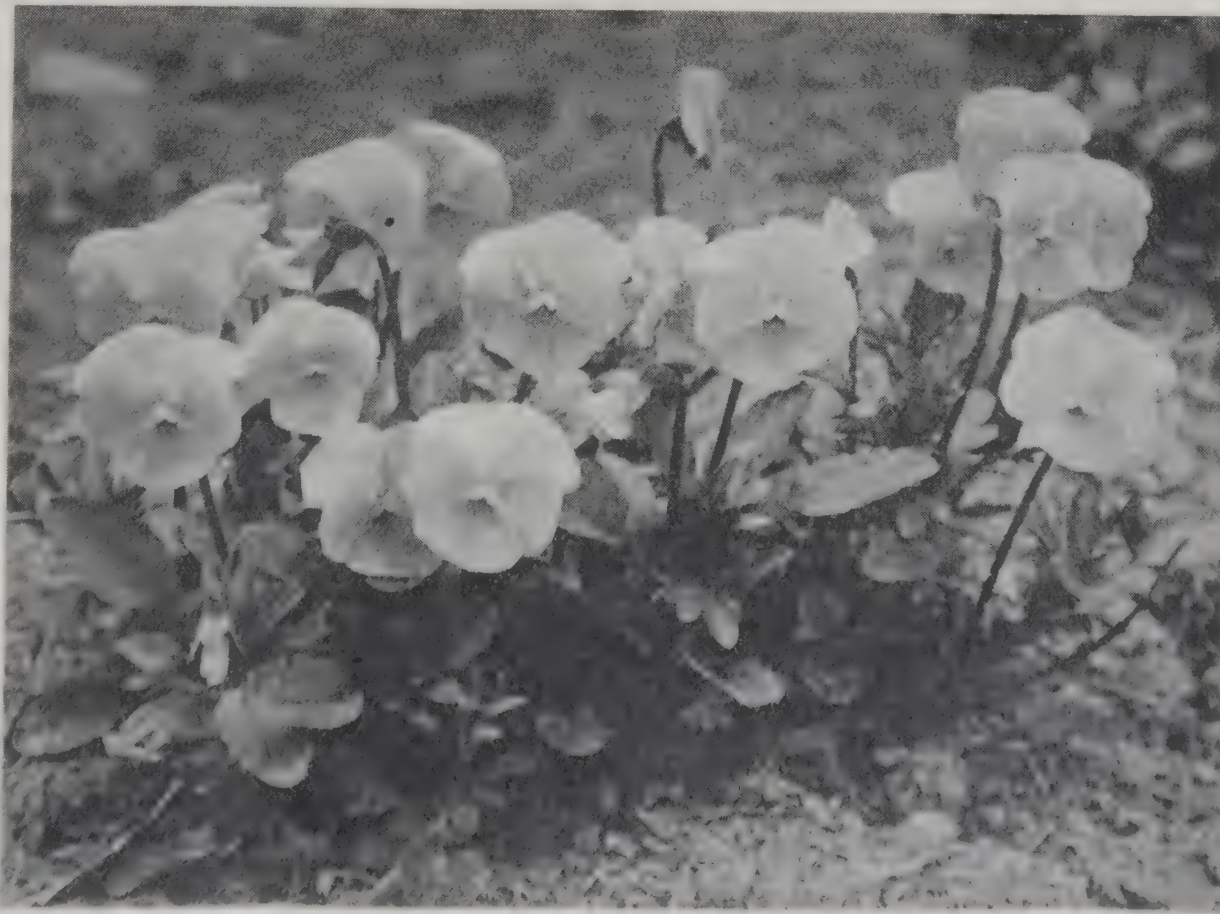
I submitted a number of my newer seedling Violettas last season, proposes to call these miniature-flowered Violas "Fairy Pansies," a very charming description of these dainty little flowers. He is of the opinion that the plants want cool soil and situations, and would probably thrive on the new moraines which people are making for all the smaller alpine flowers. I am of the same opinion, although my plants are flowered in ordinary nursery beds exposed to the sun's influence from early morning until sunset. Positions that suit the beautiful Grecian Violet (*Viola gracilis*) will answer the needs of the Violettas admirably. I have seen this attractive Grecian species growing in wonderfully vigorous fashion in a small moraine, the moraine soil consisting of the free use of sandstone chips and good, open soil. Such quarters should be ideal for the Violettas. The latter should be planted in small colonies, in order to obtain quick results. The plants are always rather small when distributed, but they very soon make beautiful little tufts 6 inches to a foot in diameter, which are freely studded with dainty little rayless blossoms.

The Viola Conference of 1894 laid down rules to define the ideal properties of the miniature-flowered type, which, briefly, are as follow:

Form may be narrow and more oval, the petals smooth and of good substance. The colour should be bright, clear and striking. The eye should be bright gold or orange, and may run into the under petal, and the flowers must be rayless. The flowers should be sweet-scented. As regards size, $1\frac{1}{2}$ inches in diameter is considered the maximum; and in regard to habit of growth, the plants should be dwarf and procumbent, short-jointed and bushy, and flower-stalks of such length as will bring the flowers well together.

Since the foregoing properties were defined, there have been developments with these plants, and the newer introductions are varied in several particulars, but not in any way to the detriment of the type; rather the reverse.

A few sorts worthy of special mention are the following: Eileen, mauve blue, very free and reliable; Cynthia, pale blush lilac; Sweetness, blush white; Vestal, white; Rock Lemon, primrose; Rock Yellow, bright yellow, richer lower petal; Rock Orange, orange yellow; Estelle, minute white, flushed yellow; Diana, primrose; Rock Blue, deep mauve blue; Molly,



ANOTHER SEEDLING VIOLETTA AT A LATER STAGE. NOTE ITS COMPACT HABIT AND STURDY FLOWERS

rich yellow, ideal form; Grace, white; Queenie, blush; Dainty, pale mauve blue; Ina, deep mauve blue; Lavinia, blush lavender; Butterfly, lower petals rich yellow, upper petals pale yellow; and the type. There are many other good things of which little is yet known, but the aforementioned varieties should make a most interesting collection.

Highgate, N.

D. B. CRANE.

ROSE-GROWING IN TOWN GARDENS.

Tea Roses.—Success with many of the Tea Roses is almost as much a matter of climate as of cultivation, and the inexperienced gardener will be well advised to commence with a few only of the hardier sorts. There are several strong-growing varieties which succeed well in most towns, and, on account of their fine qualities and continuity of flowering, these are of the greatest value, both for exhibiting and for decoration. It frequently happens that, by reason of its surroundings, a town garden is particularly sheltered, and Teas may be grown with some success; but they should always be placed in a position that will secure their protection from north or north-east winds, while giving them a full share of sunshine. Some kinds, such as the Cochets and Souvenir de Pierre Notting, which are mildew-proof, may be grown with advantage against a wall or fence having a southerly aspect.

The Best Soil.—Teas prefer soil that is lighter and warmer than is suitable for most other varieties, and a somewhat sandy loam liberally enriched with cow-manure forms an excellent staple. Heavy clay soils, which are naturally cold, need to be lightened considerably, and a quantity of leaf-mould should be added, as well as stable manure and road scrapings or other material. Many of the more vigorous kinds succeed well on standard stocks; but it must be remembered that when grown in this way it is the roots of the Briar which have to be catered for, so that they will do best in a heavier soil.

Flowers Not Opening.—One of the difficulties in growing Tea Roses is in getting the flowers to open, and there are two chief factors to success in this. The first is to maintain the plants in a healthy and vigorous condition, for a Rose that is a bad opener will seldom expand its blooms when the growths are weak. A great deal may be done to obviate this at pruning-time by cutting back to sound, plump eyes, and subsequently conserving the energy of the plant by rubbing out a number of the weakest buds. This should be done before the end of April. The second point is to protect the blooms during the opening stages, the usual method, and the easiest, being to place a Rose shade over each one. A more useful protection would be a light, glazed framework consisting of top and front only, which could be quickly placed and adjusted over any plant and as easily removed. One wonders that some enterprising horticultural builder has not already evolved such a contrivance, which would be invaluable to the exhibitor.

Easily Grown Teas for Bedding are Corallina, coral red; G. Nabonnand, flesh, shaded rose; Lady Hillingdon, bright golden yellow; and Mme. Antoine Mari, blush white. Those who prefer larger flowers should try the following kinds: Lady Roberts, buff, with orange and copper base; Maman Cochet, flesh, shaded yellow

and rose; White Maman Cochet, pale lemon; Mme. Jules Gravereaux, a semi-climbing variety, yellow, suffused pale pink; Molly Sharman Crawford, eau de nil white; and Mrs. Foley Hobbs, ivory white. Exhibitors will find many other Teas of great assistance, especially for autumn shows, some of the finest being Alexander Hill Gray, lemon yellow; Mrs. Herbert Stevens, white; Mrs. Edward Mawley, pink; Mrs. Myles Kennedy, creamy white; Mme. Constant Soupert, deep yellow, shaded peach; and Souvenir de Pierre Notting, apricot yellow. There is now a strong-growing climbing form of the last named, which, I understand, is a great improvement upon the dwarf variety and opens better. Climbing White Maman Cochet has also found its way to this country, and is sure to become a favourite when it can be obtained at a popular price, as it makes an ideal climber for a south wall.

P. L. GODDARD.

THE LATE PLANTING OF ROSES.

PERHAPS there is no greater fallacy entertained by the man in the street than that regarding planting Roses in late spring. People have remarked to me, even in February, "I should like to plant some Roses, but I fear it is too late." I have, fortunately, been able to show them beds of Roses planted even in April that quickly dispelled such an idea from their minds.

Excepting for special circumstances, I do not wish readers to infer that spring planting is preferred to autumn planting, as that would be going against all experience of practical men; but I do say that no one need hesitate to plant Roses now, and for another month to come, with a certainty of a fine display this year.

Some Advantages of spring planting may briefly be stated. First, as regards tender varieties, late planting is undoubtedly in their favour. The producer has means of protecting such Roses, even if we experience severe weather; whereas, if the amateur plants them in his garden, the chances are they would be lost. Doubtless many readers of THE GARDEN live in especially cold and wet districts. If that is so, they will do well to defer their planting until spring. I do not say one should defer ordering, but I would suggest, rather, that the plants be procured and "heeled" in the soil in a shady, sheltered spot, there to remain until all signs of winter are past.

Another Advantage of planting late is that our Roses are largely enabled to escape May frosts. These, as is well known, cause much havoc among the excitable Roses, such as the Teas and some of the Hybrid Teas; but if their growths are retarded by late planting they do not suffer, or, even if they do, it is of very little moment. Then, again, a modern Rose garden is frequently in full beauty in October, and how can one think of alterations while such a show of bloom abounds! Are we not prone to wait until the winter evenings before we formulate our plans of renewal or extension? There is yet one more advantage that may find favour with some individuals, and that is the fact of tempting bargains being offered by our Rose-growers in

the spring months, a detail that will appeal to many. To make late planting successful, one must be extra careful of the

Preparation of the Soil. We often see the advice given to amateurs to trench their soil in the autumn, even if they cannot plant until the spring. This might be sound advice for those having a light soil, but for clayey loams it is a bad practice. I have found it much more preferable on my heavy soil to wait until such time as I am ready for planting. Thus, instead of having the beds or borders saturated with the winter rain and snow, by waiting until a favourable moment for the preparation one may trench, and the planting follow immediately before the soil has a chance of becoming saturated. Nothing is so inimical to successful Rose culture as to be obliged to plant when the ground is of the consistency of soft putty.

Preparation of the Plants.—It is important that Roses planted late should be pruned back hard either before or immediately after planting. It is also advisable that they should be in a dormant condition. Many growers dig up the plants and place them in beds, and they are kept moved, so that when sent out the eyes are dormant. At all times when planting Roses a shovelful of nice compost should be given to each plant, as this, being of a fine nature, will percolate among the fine roots, and if the latter are dipped in a bucket of water first and some of this fine soil is dredged upon them, successful planting is practically assured.

Firm Planting is another very imperative detail. Not only should the soil be made firm at the time of planting, but, a week after, it is well to go over them again and set the heel against each plant. I would also advise that before placing the final covering of soil, a good watering should be given; then, after the water has been allowed to pass down, the final soil placed in position, but no treading of the soil should follow at the time. Although I am averse to mulching Roses planted in the autumn, I strongly advise a thin covering of well-rotted manure being applied immediately after the spring planting, partly to prevent that cracking of the soil by the drying winds of spring and partly to conserve the moisture. Peat moss litter would come in very useful here if not too strong. I fear many Roses are destroyed by giving them mulchings of strong manures before they have had time to establish themselves. On no account should powerful chemical manures be so applied.

How Late May One Plant.—This depends largely upon the season, but, generally speaking, Roses from the open ground may be planted as late as the middle of April. After this time pot-grown plants should be employed. It is an excellent plan, if beds of a kind are planted, to pot up a few reserve plants of each sort, in case of failures. Such pot plants may be sunk in the soil in their pots, and will prevent one having gaps in the Rose-beds during the summer. If any readers are contemplating exhibiting blooms from spring-planted Roses, I must warn them of probable disappointment; but for all who desire a beautiful display for their garden, and especially for the coming autumn, I can assure them they will be well pleased if the foregoing details are followed. Reasonable care is, of course, necessary, but I think I have made it clear that those who wish to do so may safely plant beds of Roses during the next few weeks.

DANECROFT.

HARDY HEATHS.

RETURNING to a subject which I some time ago endeavoured through the pages of *THE GARDEN*, to bring as prominently as I could under the notice of its readers, I must, in the first place, admit that in the interval I have learned that hardy Heaths are by no means so fastidious in regard to soil and situation as was at one time thought; indeed, from several letters I received appreciative of my former effort, the writers informed me that in their cases, and contrary to my advice, they found many varieties of Heaths thriving well in stiff, heavy soils. One in particular, who seemed to possess a large and full collection, assured me that his soil was a heavy, clayey one, and that the plants were thriving luxuriantly. I may here say that all my correspondents wrote from the Southern Counties of England, so that, from the evidence given, one need not be deterred from forming a Heath garden simply because he does not possess a light, sandy soil or facilities for making a compost of peat resembling the soil in which these plants are generally found growing in their native habitat. The only drawback in regard to heavy soils would be that propagation could not be so easily effected, and that a thorough system of drainage would require to be carried out before any measure of success could be attained. If we study for a short time the habits of our native Heather, *Erica* or *Calluna vulgaris*, it will be found growing both on the dry hillsides and in marshy places. In the latter, however, the Heather is always patchy and confined to little knolls over the bog. As we ascend, however, the plant becomes more scraggy and stunted, until, among bare, dry rocks, it ceases to gain a foothold, and fringes off with an odd plant here and there, attaining a height of only a few inches.

On the upland flats, at a moderate elevation, where a good depth of black, peaty soil is found, one can wade through the Heather almost waist deep, showing that here are to be seen the most favourable conditions for its growth, and those that must be copied to a certain extent if a full measure of success is expected. It is often a difficult matter to select a suitable position for the Heath garden, especially if the existing arrangements are of a formal character. It cannot very well be associated with beds of brilliant-flowering subjects such as are usually designated bedding-out plants, neither can these plants be dotted or clumped effectively in the herbaceous border. I have seen them, however, used with a fair measure of success on the margins of a large shrubbery, where they were quite in harmony with the flowering shrubs, and at another time on the boundary line of an extensive rockery, where they were planted in groups with a huge, natural-looking boulder peeping out here and there, the whole

arrangement being so cleverly executed that it was difficult to decide what really intervened between the actual rock garden with its alpine occupants and the wooded slope beyond; but there are few places where a suitable spot could not be found for planting a collection of hardy Heaths. It may be abutting on some woodland walk, in an open glade surrounded by trees, or enclosed with a hedge having a rustic summer-house in one corner, or on a steep, sloping bank where the plants can be viewed either from a high or a low level. They must, however, have an open, airy situation and be free from the shade or influence of large trees. If the soil is poor, it can be improved by the addition of manure and leaf-mould, for while the Heath will grow and flower well on thin and almost barren soils, it responds readily to a more generous fare, and to ensure success it is advisable to provide a suitable compost. Thus, a rich, heavy soil should



A HEATH GARDEN ON A HILL SIDE.

have a considerable quantity of peat, leaf-mould and sand added and thoroughly mixed together. Light, sandy soils will only require the addition of a good dressing of well-decayed farmyard manure, but an open position is desirable whatever the soil may be.

The numerous and varied forms of hardy Heaths, their hardiness and long season of flowering, covering as it does almost every month of the year, entitle them to more than passing notice, and I hope that the present fashion for creating rock gardens will soon extend itself so as to embrace Heath gardens as well, the conditions as to site and exposure suitable for rock gardening being easily adapted to the requirements for forming a Heath garden. In my next article I propose dealing with a Heath garden at present in course of construction in the heart of the Grampians.

THOMAS WILSON.

(To be continued.)

THE SNAPDRAGON AS A GARDEN PLANT.

FOR a long period in the nineteenth century the Snapdragon was regarded as a florist's flower, striped or barred, of which the finest form was one named *Hendersonii*. At the same time there was a strain now merged in the intermediate section, which was utilised in the furnishing of flower-beds, especially in those districts in which, owing to climatic disabilities, *Geraniums* could not be profitably employed. The finest of all the crimsons is still one that originated at Lord Ravensworth's very many years ago. Queen of the North and Yellow Perfection are varieties which also have been in cultivation for a lengthened period; but the æsthetic colours, both in the tall and in the intermediate sections, which have

made the *Antirrhinums* so popular, are wholly, or almost wholly, the production of the present century.

There exists a certain degree of dissimilarity in the habit, and also in the flowers, of both of these sections, some of the intermediates being so tall as to almost merge into the tall section, of which there are varieties of comparatively low stature and weak constitution. There are in the flowers, broadly, two types, the one rather small and narrow, the other broad and about three times larger, and these, too, are of the tallest growth, sometimes attaining a height of 6 feet and even 7 feet, the white and yellow being, perhaps, the most vigorous of all. Along with the Tom Thumb section we have, therefore, a choice of Snapdragons ranging in height from 6 inches to as many feet, with a marked dissimilarity of habit, and, along with a charming range of colours, a certain diversity of form.

Raising Plants. The plants are so easy of production that it need only be said that seeds for flowering the same year may be sown any time up to March, providing a smart temperature for germination is given, and afterwards growing them comparatively cool. The seedlings are apt to damp if wetted when small; therefore, dipping the receptacles in water must be resorted to when the soil requires moistening, and, if damping occurs, some fire-dried sand should be sprinkled over the surfaces, which checks and usually stops the trouble. Pricking out the seedlings when quite small into boxes or frames also stays the progress of the mischief. At this stage the leaves of every plant should be examined, best on the under sides, and all rejected which vary from the majority, because the plants assuredly will, on flowering, turn out to be "rogues," and, of course, when planting in beds, any that have escaped notice at this examination will be set aside then.

Varieties, or at least names, have increased to a perplexingly large extent within the last year or two, and for the beginner in their use it would be desirable to purchase from one seedsman only. I am growing this year some two dozen kinds of intermediate and tall derived from different sources, but most are well known already, and the remainder will be planted where any disabilities they may develop will not affect the general appearance of the garden. But no one can go wrong with, in tall varieties, White, Cloth of Gold, Golden Chamois, Fire King (or Orange King), Carmine Pink, Crimson and Gold, and Rosy Morn. These, I think, are the cream, though Moonlight, if properly associated, may also be added. I know of no very good crimson, and grow crimson, scarlet, rose and a cream form of Rosy Morn from cuttings, none of these coming true enough from seed to give satisfaction. Of intermediates are Yellow Queen, Queen of the North (white), Carmine Pink, and any pink, indeed, is worth growing, Bonfire (apricot), Light Apricot, Fire King (brighter than Orange King) and Oliver's Crimson, if it can be obtained. It should be noted that a group of the old florists' type of variegated flowers is by no means to be despised.

Arrangements of Colours.—Though easy enough to produce, Snapdragons are not quite so easy to arrange to be effective. This is on account of the colours clashing when a number are employed indiscriminately, or when associated with plants with which the colours do not go well. The tall white, with Dropmore Anchusa or Salvia patens, is really splendid, and Cloth of Gold associates equally well with Anchusa Opal, Golden Chamois and the dark blue Branching Larkspur, or with Lobelia cardinalis varieties is strikingly beautiful, while all the pink shades go with yellow.

orange and mauve. But Snapdragons are never more charming than when used by themselves in colours properly matched. My own rule is to detach pure white and yellow from the others; not that they cannot be associated effectively enough, but I do not think they add anything to compositions equally, if not more, effective when either is absent; but that, of course, may be a mere personal whim. Tall Golden Chamois, Carmine Pink and Light Pink with the intermediate Carmine Pink provide a very lovely combination. So do the apricot shades with Fire King, both tall and intermediate, and the series of pink shades along with the apricots is very nice, though I am rather dubious if the deep apricot of Bonfire were



A CARPET OF SPRING SNOWFLAKE (LEUCOJUM VERNUM) AT WISLEY.

not better left out. As a rule, beds or borders furnished with Snapdragons should be filled entirely with them, an edge of another kind of plant always detracting from the value of the colour mass as a whole.

I should add that, although we have Snapdragons thriving on walls, to do them well requires very thorough and good cultivation. The finest I have ever seen were in Herefordshire, growing in made-up beds of turf and loam, in which some of the spikes rose to a height of 7 feet. A pigmy of 2 feet or 3 feet compared to these is simply nowhere, although it might perhaps appeal to some.

R. P. BROTHERSTON.

COLOURED PLATE.

PLATE 1489.

A NEW PERPETUAL-FLOWERING CARNATION.

THE new Perpetual-flowering Carnation Gorgeous must be considered an epoch-making variety, for all who have seen it have been enraptured with it. It has a strong, clean, healthy growth, a wonderful stem, and a calyx which rarely bursts. The colour is of a rich glowing cerise with the clearness of Aristocrat, but with none of this variety's weakness in its young state. When the flower is about half open, it has a yellowish, glistening sheen on its petals, which gives it a sunray cerise tone, and under artificial light it stands alone for the brightness of its colourings, giving way to a glowing scarlet; in short, we might quote a passage from Charles Kingsley's "Westward Ho": "There is nothing like it under the canopy of Heaven." It has come to stop, and will be what Enchantress has been in the past. The honours awarded to this variety are an award of merit from the Perpetual Flowering Carnation Society, an award of merit from the Royal Horticultural Society, and certificates of merit at Liverpool and Bristol. We are indebted to Messrs. Stuart Low and Co., Bush Hill Park, Enfield, for the flowers from which our coloured plate has been prepared.

SPRING SNOWFLAKES.

ONE of the most delightful flowers now to be seen in the Royal Horticultural Society's Gardens at Wisley is the Spring Snowflake (*Leucojum vernal*). It has naturalised itself in many places, and may be seen flowering among the Crocuses and Polyanthuses in the borders, or producing its drooping, bell-shaped flowers in out-of-the-way parts of the wild garden. One of the most pleasing effects is a carpet of Snowflakes flowering freely under the bare canes of a cultivated *Rubus*.

CHINA ASTERS IN THE WOODLAND.

THE illustration on page 133 shows a picturesque grouping of the China Aster naturalised in grass under the partial shade of trees. The means whereby this effect was produced are somewhat curious, as it was the result of accidental sowing. The ground under the trees had been cleared and dug over preparatory to sowing it down with grass. By a misunderstanding among the workers, both grass and Aster seeds were sown over the same patch of ground. The result, however, is so pleasing and natural that it is worth noting, as it is a simple way of converting a waste piece of ground into a place of unusual splendour. The Asters were sown in April, and flowered well through August and September.

SIX BEAUTIFUL DWARF ANNUALS.

ALTHOUGH the widely cultivated Stocks and Asters are very beautiful, I often wonder that some of the other half-hardy annuals are not more often met with in quantity. There seems to be in many quarters an antipathy against trying anything new, and the result is that we come across the same kinds of flowers year after year in gardens; whereas, by having a little more variety, a much more interesting display would be forthcoming. The six kinds I have selected are such as one seldom sees

ture until growth is well started and the weather fairly settled, when they should be removed to a cold frame. Give abundance of air and harden off by the middle of May, when they ought to be planted out in fairly rich soil and in a sunny position. While all these annual (or biennial should I say?) Pinks are beautiful and useful, I, personally, prefer a good strain of the Hedderwigii type. Single and double are equally worthy of extended cultivation, and no garden should be without them.

Dimorphotheca aurantiaca.—This comparatively new plant, introduced from South Africa by Messrs. Barr, is a most telling bedder in a sunny season. I have grown it every year since its introduction, and it never fails to draw attention

little else will grow, but it should have a position in full sunshine if it is to give of its best.

Larkspur.—Although the dwarf forms of this grand plant can never compare with the tall, branching kinds, still, they are very valuable for small beds and for small gardens where space is at a premium. The dwarf Rocket Larkspur is so cheap that the seed may be sown where the plants are to bloom, and can then be thinned out to 4 inches or 5 inches apart. The dwarf Stock-flowered type is worth the trouble of raising in boxes and being treated like a half-hardy annual. Sow towards the end of March, for if raised too early the plants are apt to become unhealthy before the weather is favourable for planting them out. Fairly rich, well-tilled soil should be given



SINGLE CHINESE ASTERS IN AN OPEN WOODLAND. THESE WERE THE RESULT OF ACCIDENTAL SOWING.

in quantity in any garden, and it is in the hope of arousing a little interest in these beautiful flowers that I now write. I refer to Dianthus, Dimorphotheca, Jacobea, Larkspur, Nemesis and Phlox Drummondii.

Dianthus (Pinks).—The Indian and Japanese Pinks, when a good strain is obtained and well grown, are hard to beat for filling small beds or borders and for cut flowers. Seed should be sown thinly in pans or boxes early in March and placed in gentle heat. The seeds germinate very rapidly, and care must be taken to prevent the little plants becoming drawn and weakly. Prick off into boxes of good soil as soon as large enough to handle, and return to the same tempera-

ture from all visitors. Those who like mixed colours should grow the new hybrids, for they give some pretty shades besides white. Seed should not be sown before the middle of March, and the end of that month is not too late for it. Treat it exactly like Stocks in the way of sowing, pricking off, and subsequent treatment. Plant out at the end of May in good soil and in the sunniest spot available.

Jacobe.—This Groundsel is usually classed as a hardy annual, but here in Scotland I find much the best results are obtained by treating it as half-hardy. Sow at the end of March, plant out towards the end of May in rather poor soil, and a really fine display of bloom will be forthcoming. This plant will often thrive where

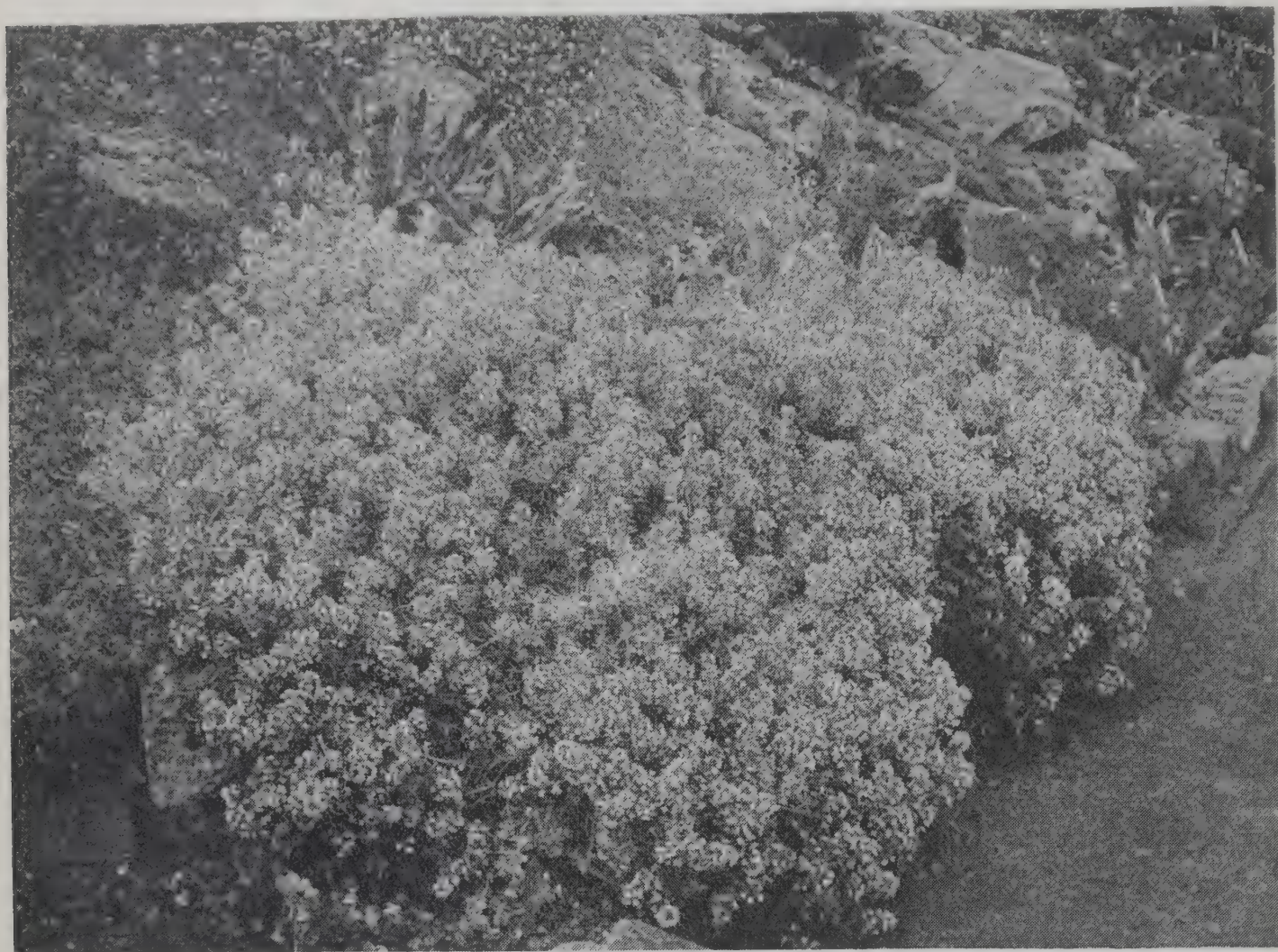
this plant, and if the position is exposed and staking necessary, then place the stakes at planting-time, for the roots of these Larkspurs are very easily damaged.

Nemesis.—This is without a doubt the most beautiful of all dwarf annual flowers, and should be much more widely cultivated than it is at present. Many sow the seeds much too early, and also place the seed-pans in too high a temperature. Nemesis seeds will not germinate strongly nor freely in a temperature much over 60°, and the last week in March is the best time for sowing. Prick off into boxes of fairly good soil and in good time, and do this with extra care, for the Nemesis in its earlier stages is rather delicate. When it

starts fairly into growth, after being pricked off, all danger is past, and the plants should be kept near the glass in a moderate temperature. At the beginning of May remove to a cold frame, harden off gradually, and plant out early in June, choosing rich, deeply dug soil and a sunny aspect. While the large-flowered form is very rich and

ROCK GARDEN PLANTS FROM SEED.

A BRANCH of gardening alike interesting and profitable, and having special attractions for the amateur, whose delight it is to garden among rock plants, is found in raising these and kindred



THYMUS ODORATISSIMUS, A FRAGRANT PLANT FROM RUSSIA. THYMES ARE EXCELLENT SUBJECTS FOR THE ROCK GARDEN AND MAY BE RAISED FROM SEED SOWN NOW.

beautiful, I much prefer the dwarf hybrid strain of Messrs. Sutton. This firm has greatly improved the colours of this section of late years, and a bed or border filled with this grand *Nemesia* takes some beating. The plants branch so freely that about twelve inches asunder is the proper distance to plant if a really effective display is aimed at. The large-flowered type must be planted much closer, say, from 7 inches to 9 inches.

Phlox Drummondii.—When well grown, this is only second to the *Nemesia* for beauty and effectiveness. The seed should be sown during the last week in February or early in March, and be grown steadily on in a slight warmth until the plants have reached a fair size. *Phlox Drummondii* is well known to be one of the easiest of all annuals to cultivate. Even in town gardens it will succeed, while it is usually one of the first subjects to bring to the notice of children who show a fondness for garden flowers. Nevertheless seed must be sown thinly and thinned early. For filling small beds or for making an edging for taller plants they are equally effective. Soil of a fairly rich nature gives the best results. All the sections are good, but for general usefulness the intermediate is preferable. If a really fine strain of this is procured, a grand display is certain.

C. BLAIR.

Preston House Gardens, Linlithgow.

subjects from seed. It is hardly possible to overrate the amount of healthy recreation this delightful pursuit affords; it yields an enormous amount of information that cannot be acquired otherwise, while it furnishes a splendid stock of plants, either as the nucleus of a collection or for augmenting that already in existence. The actual procedure in the raising of alpine plants from seed does not materially differ from that practised with the choicer kinds of annuals of a tender or half-hardy nature, except that they entail more attention to details in the initial stages.

Best Time for Sowing.—The spring months offer the best season in which to start, as this gives a long growing season and enables plants of a presentable size to be obtained before the ensuing winter.

Proper Soil.—The method I generally follow is to sow in pots, pans or shallow boxes, according to the rarity of the variety. The receptacles are provided with liberal drainage and partly filled with a moderately coarse compost consisting of yellow loam, leaf-soil and sand in equal parts, this being passed through a half-inch sieve to complete filling the receptacles. The seed-bed should be quite level, and, as many of the seeds are very small, they scarcely want covering at all, while the larger seeds, like those of *Androsace*, *Dianthus* and *Iberis*, will bear covering to a depth of an eighth of an inch.

Watering the Seeds.—To those unversed in watering fine seeds with water-pot and rose, a safe method to employ until the seedlings are large enough to handle is to stand the pots and pans almost to the rim in a tub of water; by this means the seed is not displaced, as may readily follow from the careless use of a water-pot. After sowing, place the seed-pans in an ordinary greenhouse or in a frame upon a slow hot-bed, and cover over with a square of glass. This hastens germination, and, as the seedlings appear, gradually tilt the glass covering to admit air till, eventually, it can be dispensed with altogether.

Treatment of Seedlings.—Once germination takes place, the seedlings must be kept well to the light, and from this stage onward an unheated garden frame will give the best results, using sun-heat alone to maintain a growing temperature. When the seedlings are large enough to handle, they are pricked out into pans or boxes, using a compost as advised for seed-sowing, to which one part of rough grit is added. In pricking out and all subsequent potting, keep the soil moderately firm, otherwise growth will be coarse and sappy and the plants will give more trouble in hardening them off for permanent planting outside. Once the plants come to a fair size—in the case of the more robust kinds this will be some time in June, if sown during March—they may be potted singly and then plunged in nursery rows or in beds of coal-ashes. This method reduces the amount of attention necessary to keep them supplied with moisture, and it ensures stocky, hard-grown plants, such as rarely fail to give satisfaction when used in the permanent scheme of the garden.

Seeds Remaining Dormant.—Many kinds of alpine plants, among which *Primulas*, *Gentians* and some *Saxifragas* may be cited as examples, lie dormant some time after sowing, and where this occurs the seed-pots must be kept nicely moist, with the glass covering on, until either germination takes place or it is seen that the seed is useless. Some *Primulas* and *Gentians*, however, will germinate after being sown twelve months. *Ramondia* is typical of a class of alpine that exacts much care the first season; the seed is so small that the tendency is to sow too thickly, and, as it is usually several months before it is even possible to pick up the seedlings, much less handle them, the necessity for sowing thinly becomes obvious.

The great majority of the rock and alpine plants that can be raised from seed will flower in the year following that in which they were sown. These include *Æthionemas*, *Alyssum*, *Androsace*, *Anemone*, *Arenaria*, *Aster alpinus*, *Campanulas*, *Dianthus*, *Drabas*, *Erinus*, *Geranium*, *Gypsophila*, *Hutchinsia*, *Hypericum*, *Iberis*, *Leontopodium*, *Lithospermum*, *Phyteuma*, *Primula*, *Saponaria*, *Sedum*, *Silene*, *Tunica*, *Veronica*, *Viola* and *Wahlenbergia*. Among those that do not flower till a later period, besides the exceptions already noted, are *Lithospermum Gastoni*, *Ramondia*, *Thymus*, *Gentians* and *Saxifragas* like *burseriana*, *lantoscana* and *longifolia*.

THOMAS SMITH.

Coombe Court Gardens, Kingston, Surrey.

THE JAPANESE OR CAPE PLUMS.

CAN THEY BE GROWN IN THIS COUNTRY?

AMONG the foreign fruits which invade our markets at the present season, one of the newest comers is the Cape Plum. This fruit so differs from the Plums commonly known in this country that many curious legends are current as to its origin. The matter, however, is wrapt in no mystery and is of great interest, as these Plums are among the newest fruits which we owe to Eastern Asia, and their culture in America is already great. The wild species from which this race is developed is *Prunus triflora*, a native of China, and its garden varieties are there cultivated in a rather haphazard way. When imported into Japan it gave rise to very many new varieties, of which the nomenclature is, unfortunately, very uncertain. The pointed varieties are grouped under the name Hattankio, and the round ones Botankio, while the general name for these Plums as a whole is Sumomo. Some seventy-seven varieties are named in a list before me, a few of which are now known in many parts of the world.

About the year 1870, American growers began to interest themselves in this fruit, and importations were made, notably by John Kelsey of Berkeley, California. A perfect boom in Japanese Plums then began, and new sorts were imported and seedlings raised, and the nomenclature was soon in a state of the wildest confusion. The fruits themselves, however, prospered, and have now become a large and important source of fruit supply in the United States. From America they were imported to the Cape, where the climate suits them admirably, and they thus reached our shores by a roundabout route, gathering on the way yet another name, "Cape" Plums.

The principal varieties now grown are Botan, or Abundance as it is more generally known in America; Burbank, a Japanese variety renamed after the much-advertised raiser of fruits and flowers in California; Chabot, Hale, Kelsey, Maru and Shiro. Wickson, a large and excellent fruit, is the result of a cross between *P. triflora* and *P. Simonii*, also a native of China.

As to the adaptability of these fruits to the English climate, experiments so far lend no hope to this possibility. Burbank has fruited occasionally, but all the other sorts are too tender in most places for open-air culture unless on a wall. The extreme earliness of the blossom is often, too, a cause of failure, both on account of severe weather and the lack of insects for pollenising. It is stated in America that the Myrobalan (*Prunus myrobalana*) or Cherry Plum is a good polleniser for all the Japanese Plums, and where one sort only is grown, a plant of this would be valuable, as it flowers at the same time.

Under cool orchard house culture, however, these Plums succeed

admirably, and the fruit is extremely good both to eye and palate. The best sorts for this culture are, as far as I have tried, Burbank, a beautiful, transparent, round fruit; Botan, a pointed fruit, large, dark red and extremely rich; Shiro, pale creamy yellow, remarkably juicy; and Wickson, an enormous, pointed, rich crimson fruit. A remarkable feature of all these Plums is the extraordinary amount of blossom produced. Burbank is often so thickly set with bloom that it is literally impossible to see the wood for the flowers. The resulting crop, however, is not usually more than normal.

In conclusion, these fruits can be highly recommended for glass culture. They should be tried on walls, and in the warmer parts of this island they would probably succeed as standards or pyramids in the open.

Maidstone.

E. A. BUNYARD.

SEASONABLE NOTES ON VEGETABLES.

Parsnips.—Owing to the continuous rains during February, the sowing of Parsnip seed was delayed. No time should now be lost in doing this work. Deeply trenched soil that has been previously manured for a former crop is the best. With an iron bar make holes 3 feet deep, filling the holes with a compost of fine gritty soil. Sow two seeds in each hole, the holes 15 inches to 18 inches apart, the rows 2 feet wide. This method prevents the roots becoming crooked, as they often are in stony soil without this special preparation.

Turnips.—Sow a pinch of seed of White Milan in a frame on a slight hot-bed to give an early supply of small roots. On a warm, sheltered border sow in drills in prepared soil, also a pinch of seed of Red Milan, as, with genial weather in April, nice roots may soon be obtained.

Celery.—For use in August and September seed should now be sown quite thinly in boxes in sandy soil in a temperature of about 55°. Directly the seedlings are up, place the boxes on a shelf near the glass, so that the growth made shall be of a stocky character. If the plants become drawn owing to overcrowding or too much heat, they are quickly ruined, and it is a waste of time to continue their growth. Giant White and Aldenham Pink are good varieties.

Rhubarb.—An open site, with ample space between the roots for full leaf development, and a deeply trenched and heavily manured soil are the salient conditions necessary to ensure success. Plant single crowns just under the surface 4 feet apart, and as much or more between the rows. After planting, fork over the ground among the plants, and mulch lightly with half-decayed stable manure. Royal Albert for forcing, The Sutton for general growth, with Champagne and Victoria for ordinary use, are desirable varieties.

Tomatoes should be sown at intervals as space can be found under glass for the plants. The chief point is to avoid overcrowding. Grow the plants near the glass to avoid weakness, and pot on as required. Many failures with Tomatoes in the open can be traced to faulty management of the plants, especially in sowing too late, which does not enable the plants to be large enough at planting-time. The middle of March is a good time to sow seed for outdoor growth. The plants should be vigorous, of full size, and thoroughly hardy when put out. Should they show signs of turning yellow owing to being pot-bound previous to planting, give them liquid manure freely. Sunrise for indoor growth and Holmes' Supreme for outside are good. Dobbie's Golden Drop is an excellent small-berried yellow sort for outdoors.

Spinach is such an increasingly favourite vegetable that more encouragement should be given it. Frequent small sowings are better than



THE CAUCASIAN CATCHFLY (SHELLY-HAFTAL) GROWN FROM SEED

those larger and less often. On a warm, sunny border the first sowing should be made; afterwards, between rows of Peas and Runner Beans. Round-seeded and The Carter are desirable varieties, with The Victoria for a main crop.

Potatoes.—Now is a good time to make the first plantation of May Queen, Sharpe's Victor and Myatt's Ashleaf for the earliest crop. At the foot of a south wall or on a warm, sloping border is the best site. The tubers having been sprouted previously in a cool place, plant them 15 inches apart in rows 2 feet wide, covering the tubers with a prepared sandy compost in which decayed leaves figure freely. Too much attention cannot be paid to the sprouting of the tubers in a cool and dry place. Neglect in this direction may lead to disappointment.

Radishes should be continuously sown at brief intervals in Potato, Carrot or Asparagus forcing-frames. An outside sowing on a warm border should be made, covering the bed with straw to encourage early germination of the seed and to protect the tiny plants, as they peep through the soil, from birds of the linnet type.

Peas.—A sowing in the open of such varieties as The Pilot, Edwin Beckett or Sutton's Early Giant should be made, covering the seeds with decayed leaf-mould or old potting soil, which encourages quicker root action than the ordinary soil, which is still cold.

Swanmore. E. MOLYNEUX.

PEAS: CULTURAL HINTS.

GOOD, fresh Peas are generally appreciated, and every pains should be taken to produce these in the best possible condition over as long a period as possible. Thanks to those who have given so much time and trouble during recent years to hybridising and selecting so many varieties, both early, midseason and late, much less trouble will be experienced than was the case only a few years ago. Undoubtedly it is much easier to have good Peas for the table from the middle of June to the end of the second week in July than at later dates, and almost everyone possessing a garden has little difficulty in having them at this season. By the time these lines are in print the seeds will have been sown and be well on the way for the early crops, and my remarks on this occasion are intended principally for successional crops.

The garden Pea is a deep-rooted subject, and during spells of drought will penetrate deeply in search of food and moisture if such soil be made amenable, so that in all cases the ground should be broken up at least 3 feet in depth, placing plenty of good farmyard manure in the bottom of the trench. This work is best done

during the winter or early spring. Unquestionably the best method is to prepare trenches precisely in the same way as one would for Celery, and especially so for late varieties and on dry, porous soils; the application of manure and other suitable compost is rendered much more easy, as well as being much more convenient for watering purposes. Such trenches should always be prepared, when possible, some weeks previous to the seed-sowing; the soil thus becomes sweetened

done just as thick again as it is intended for the plants to remain, which should be thinned out as soon as the young plants are 2 inches or 3 inches in height. Naturally, the strongest and tallest growing kinds require more room than those of less robust habit; but in nearly all cases of the better kinds of Peas the plants should not be left thicker than 3 inches apart. Always sow two lines in a trench, and, where mice and other vermin abound, the seed should be rubbed in red lead and allowed to dry before using. At the same time, means should be taken to trap mice or rats. It is always wise to set some tempting baited traps for mice, whether they are known to exist or not. At the time of sowing, a little bone-meal should be sprinkled along after the seed is sown; this will prove a splendid stimulant. Care should be taken to protect the young growths from the ravages of birds immediately they appear above the ground. This is best done by straining three lines of black cotton about four inches above the surface of the ground.

Staking.—As soon as about four inches of growth is made, staking should be proceeded with. Though there are several inventions for supporting Peas, I have not yet come across anything to supersede, or even equal, ordinary brushy wood stakes. This task should be carried out in a pleasing and workmanlike manner, thrusting the ends well into the ground sufficient to withstand any wind pressure. The tops should be taken off and placed between the stakes, with a view to conducting the tendrils to the larger stakes. To ensure a regular supply during the late summer, sowings should be made at intervals from this date to the middle of June.

Mulching.—I regard this as of the greatest importance on all kinds of soil, nothing being better for the purpose than short stable litter. It has a wonderful influence, of prolonging the crop, especially during spells of dry weather.

Watering.—The plants will be much benefited by applying frequent drenchings of water to the roots, both clear and in a liquid manure form, during dry spells, always using water, if possible, which has been exposed. It is equally as important and beneficial to syringe or damp the growths thoroughly after a hot day with clean tepid water; this is best done in the early evening. When extra large pods are required, either for exhibition or other purposes, the growths should be stopped, side shoots cut away and the pods thinned.

Varieties.—Though, as before stated, there are many excellent varieties, I propose to give a short list of what I believe to be among the very best and in their order of sowing: Duke of Albany, Prodigy, Alderman, Stourbridge Marrow, Quite Content, Centenary, Gladstone, Rearguard, Masterpiece and Autocrat. EDWIN BECKETT, V.M.H.



THE SAME BED AS SHOWN ON THE OPPOSITE PAGE, SHOWING THE EFFECT OF SOWING CANDYTUFT BETWEEN DARWIN TULIPS.

and in a much more workable condition than when left till the last moment, though sometimes this cannot be avoided owing to the ground being occupied.

Sowing the Seed.—In the large majority of cases the seed is sown much too thickly, the result being anything but satisfactory. I am convinced that there are far more failures due to this cause than to any other. In many cases one will see rows of Peas left almost as thick as Mustard and Cress, and expected to produce a crop. Surely if one would only give it a thought, it is unreasonable to expect a dozen plants to succeed when one would suffice, the result being that the plants become starved and in many cases eaten up with mildew, and, after a picking or two, the plants become exhausted. The best plan is to sow the seed singly at regular intervals, and this should be

GARDENING FOR BEGINNERS.

ANNUAL FLOWERS IN ASSOCIATION WITH OTHER PLANTS.

TO the beginner in gardening, especially if his or her garden is of small size, there are few more useful flowers than hardy annuals, and few that will give such a bountiful return for a small outlay of time and money.

Indeed, these annuals, which may be sown in the open garden, may be looked upon as a sort of sheet-anchor for the novice, to fill up blank spaces where perhaps some more ambitious gardening scheme has gone awry, or to fill the hiatus caused by the passing of spring-flowering perennials or bulbous plants. The gardener in a large establishment can rely upon pot plants or nursery stock to make good these gaps, but the beginner can seldom afford this, and still less frequently has the facilities for carrying it into effect.

Too often, bulbs, especially the May-flowering Tulips, are a source of great worry to the amateur. Owing to their late flowering and subsequent ripening of the foliage, they cannot with safety be removed from beds or borders sufficiently early to admit of the planting of the ordinary bedding plants, and for this reason many forego the pleasure that these bulbs are capable of providing and ban them from their gardens. This is a great mistake, and one that can easily be obviated if we would make more use of hardy annuals. Early in April seeds of these can be sown between the bulbous plants, and, by the time the latter have finished flowering and the leaves have died down, the annuals will be well on the road towards the flowering stage, and the bulbs none the worse for the association. Even beds of Daffodils may be successfully treated in this way, and if the bulbs are lifted in early autumn, before they have made extensive new root growth, and replanted at once, they will be in much better condition than if they were lifted this spring, before their foliage had properly ripened, to make way for the usual Fuchsias, Calceolarias and Zonal Pelargoniums that are so often relied upon for the summer display. It is true that these bedding plants commence to flower almost as soon as they are planted, and that the annuals seldom commence before July; but the four weeks or so that the beds or border spaces are without blossoms is not noticed in a garden of mixed flowers. It is mentioned to prevent possible disappointment to would-be growers of annuals.

Apart from those kinds which can be sown between the bulbs or spring-flowering perennials, there are many half-hardy sorts that may be raised in frame or greenhouse and planted out

between the permanent occupants during the early days of May. Into this category come Antirrhinums, China Asters, Stocks, Nemesis and Verbenas, all of which are capable of providing a glorious riot of colour during the late summer and autumn days.

There are just one or two simple cultural details that ought to be observed if success is to be assured with this association of annuals with perennial and bulbous plants. First of all, the soil needs some little preparation, especially if seeds are to be sown. I have always found it advisable to

of space from the outset. A weak seedling can never make a sturdy plant; hence it is necessary to lay a good foundation. This thin sowing, then, must be supplemented by a rigorous thinning of the seedlings at the outset of their existence. This is necessary even when annuals are being grown alone, but doubly so when in association with other plants. Just one other item. It will not materially harm the bulbs or herbaceous plants if just a few, a very few, of their largest leaves are removed to give the annuals more light and air during the early stages of their career. To bulb enthusiasts this will, I know, seem like rank heresy; but in gardening, as in everything else, it is advisable at times to adopt a policy of give-and-take.

There are a good many hardy annuals suitable for this association, such as Candytuft, Godetias, Clarkias, Virginian Stock, Mignonette, Alyssum, Leptosiphon, Nigella Miss Jekyll, Larkspurs, Shirley Poppies, annual Chrysanthemums, scarlet and blue Flax, and Pot Marigolds. The accompanying illustration may be of interest, as it represents a bed of Darwin Tulips edged with old-fashioned Pinks, and a plant of perennial Candytuft in the foreground. On the opposite page is an illustration of the same bed, from a photograph taken in the month of August. The Candytuft shown there was sown between the Tulips as advised, and the charming effect will readily be seen.

H. H.

A GOOD ANNUAL FOR THE GREENHOUSE.

BROWALLIA SPECIOSA MAJOR is such a pleasing little plant under quite ordinary cultivation that I wonder it does not become more popular. It is of the Solanaceæ Order and is almost hardy, but succeeds best when growing in the greenhouse or conservatory. The seed should be sown during March in shallow pans or boxes in a compost of equal parts of turfy loam, leaf-mould and sand, and kept near the glass. Pot up as necessary with a good fertile soil, shading from very bright sunshine. Some cultivators advise pinching the plants occasionally during the growing season, but

this I never do, as I think they are more graceful when left to grow quite naturally. Each winter my greenhouse is brightened with groups of these charming plants and their pretty blue flowers. Other good species of *Browallia* are *B. grandiflora*, which is also very pretty, with much smaller flowers than *B. s. major*, and *B. Jamesonii*, better known as *Streptosolen Jamesonii*, which has orange-coloured flowers and grows considerably taller than the two before-mentioned varieties. I. T. D.



A BED OF DARWIN TULIPS EDGED WITH PINKS. ON THE OPPOSITE PAGE THE SAME BED IS SHOWN FILLED WITH CANDYTUFT, SOWN BETWEEN THE TULIPS.

lightly point between the plants with a small fork, so as to get about two inches of fine, workable soil. Into this some superphosphate of lime, a large handful to a square yard, is well worked, as this provides food of a lasting character to the annuals just at their flowering period. Then, thin sowing is absolutely essential. Sturdy seedlings only are of any use for this kind of gardening, or, indeed, for any other; hence one must impress upon the beginner the vital importance

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Fig Trees in Pots.—Trees which were started in December should now be making good progress, and will require some stimulant to assist them in swelling their fruit. Guano is a very reliable manure for this purpose, but must be given in moderation. Pinch the shoots when a few inches long to encourage the growth of a second crop of fruit. Syringe the trees twice daily and shut the house early in the afternoon. A night temperature of 60° will be quite high enough, rising to 70° by day with sun-heat.

Peach Trees in Pots.—The earliest trees are now swelling their fruits, and should be watered with great care. If they are once allowed to become too dry at the roots, the prospect of a satisfactory crop will be much reduced. When the stoning period is over, liberal supplies of manure-water should be given. The final disbudding may now take place, leaving two or three well-placed shoots on each branch, some of which may afterwards be pinched to a few eyes from the base.

Melons.—If these are to be grown in flat pits or frames, no time should be lost in making up the hot-bed, which may be composed of two-thirds Oak leaves and the remainder of stable manure. The leaves create a mild and lasting bottom-heat, which is indispensable in the production of Melons in unheated pits or frames. In making up the beds for wooden frames, the material should be at least 3 feet larger than the frame, in order to allow a good quantity of fermenting material to be placed round the box when necessary. The soil may consist of turfy loam and a good sprinkling of old lime rubble. This should be placed in the pit several days before the plants are ready to put out. The mounds of soil should be at least 15 inches deep, and when warmed through should be made firm by treading. When two rough leaves have been produced, the plants should be carefully put out and the soil made firm. When growth commences, the tops should be pinched out and four shoots taken from each plant, and, trained on the surface of the bed, these will in due time produce numerous side shoots, on which the young Melons will appear.

The Flower Garden.

Border Chrysanthemums.—If the stools of these were lifted in November and placed in a cold pit, there should be no difficulty in finding plenty of sturdy cuttings now. If these are inserted in small pots of sandy soil and stood in a close, cold pit, they will soon make roots. Three cuttings may be placed round the edge of a 3-inch pot, and when sufficiently rooted they may be raised quite close to the roof glass and gradually hardened for planting at the beginning of May.

Seed-Sowing.—There should be no delay in sowing seeds of French and African Marigolds, China Asters, Ten-week Stocks, Phlox Drummondii, Zinnias, *Dimorphotheca aurantiaca*, *Dianthus* and *Rhodanthe*. All of these may be sown in a cold pit quite near the glass, and should be pricked off as soon as large enough to handle. Primrose and *Polyanthus* seeds should now be sown in the open border or in a cold frame to produce plants for flowering next spring. These should be transplanted 6 inches apart as soon as large enough.

Bedding Geraniums.—If the stock is at a short, no time should be lost in taking cuttings. If placed in 2½-inch pots and stood on a bed of fine ashes over a gentle hot-bed, they will soon make roots, and may then be potted into 4-inch pots. *Coleus*, *Iresine*, *Alternanthera*, *Lobelia* and *Ageratum* should be propagated as soon as possible, so that good, strong plants may be available by the middle of May.

Dahlias.—Early struck cuttings should not be allowed to become stunted for want of potting; but, as soon as sufficiently rooted, they should be potted into 5-inch pots and grown in a temperature of 50° quite near the glass. When established, air should be freely admitted. Cuttings may still be taken and placed in brisk bottom-heat.

Tuberous Begonias.—The tubers of these should now be started into growth. If placed in shallow trays and stood in a warm house, they

will soon make young growth, and should at this stage be potted singly into 5-inch pots in a compost of loam and leaf-soil in equal parts. Water carefully until the plants are established. After this stage air must be admitted in sufficient quantity to keep the plants stocky.

The Hardy Fruit Garden.

Alpine Strawberries.—If fruits of these are required during September and October, the plants may be raised from seed now. If sown in pans or boxes and placed in a temperature of 50°, the young plants will soon appear. Prick them into small pots when large enough and grow in a cold pit quite near the roof glass. These seedlings should be ready to plant out in May.

Figs.—The pruning and nailing of Fig trees on south walls should be finished as soon as possible. Let the old wood be well thinned out, leaving as many short-jointed shoots as possible without crowding. Figs are liable to make too much soft growth unless planted in restricted borders; but this may easily be avoided by building rough underground walls when the trees are planted. It is advisable to protect the trees from early spring frost by blinds.

The Kitchen Garden.

Peas which have been raised under glass for planting on a south border should be gradually hardened. The plants may now be fully exposed during the day by the removal of the lights. When sufficiently hard, they should be carefully planted out, and protected from cold wind by evergreen branches placed along the sides of the rows.

Young Pea Plants raised in the open garden will now be ready for sticks. Let these be placed in position with as little delay as possible.

Onions and Leeks sown in the early part of the year should now be ready for transplanting into boxes, and be allowed 3 inches or 4 inches between the plants each way. Keep close for a short time, and when established they should be freely ventilated in order to prepare them for planting out in the middle of April.

Celery.—Seeds should now be sown for the principal batch of Celery. Very little heat will be necessary if sown in boxes and placed in a slightly heated pit until the plants are through the surface. They may then be removed to a cold pit quite near the roof glass and protected from frost. The early batch of plants should now be ready for pricking into boxes of fine rich soil. These should be steadily grown without a check, and never allowed to suffer from the want of water at the roots.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Cauliflowers.—Plants that have been wintered in cold frames will perhaps be all the better for being planted out now if the weather is at all suitable. This will make room for other plants requiring protection. It will, however, be well to protect the young plants with some Spruce twigs. These will serve the double purpose of giving shelter and acting as a protection against game, particularly pheasants. A slight dusting of lime or soot will ward off slugs.

Onions.—Autumn-sown Onions may now be planted out, and if space is limited, they may be planted between the rows of some permanent crop, such as a new plantation of Strawberries. This crop of Onions will generally be found to be of great value when one has difficulty in getting the spring-sown Onions to ripen early enough.

Potatoes.—Another planting of early Potatoes may be got in, but in cold districts it will be better to wait until towards the end of the month before planting maincrop varieties.

Turnip-Rooted Beet.—Where one is expected to have a supply of early Beet for salads, I find it is a capital plan to make a sowing of the Turnip-rooted variety in frames about this date. They are much earlier than the long ones, and can be used when quite small. In growing in frames, care should be taken to give plenty of air, unless on very cold days, as Beet resents coddling.

Tomatoes.—For those who only grow one crop of Tomatoes, the present is a suitable time to get the seeds sown. Sow very thinly, and as they only take a few days to germinate, the seed-pan should be examined each day, otherwise I find that if the seedlings are left one day longer than they should be, they become drawn. Like all other plants, a good start is half the battle. Keep close to the glass and prick into small pots as soon as they are ready, and at this stage avoid cold draughts.

The Flower Garden.

Hollyhocks.—Where these are grown from seed sown last month, they will now be ready for pricking out, and for this I would advise doing so into small pots in preference to boxes. To have them in bloom in the autumn, they ought to be kept growing steadily in heat for some time yet and potted on when required. They will amply repay any extra care bestowed on them at this stage, as well-grown plants treated as annuals are seldom attacked by the Hollyhock rust.

Cosmos.—The new early flowering varieties of this fine annual are particularly effective dotted among the herbaceous plants. If sown now, pricked into frames and planted out as soon as they are ready, they will bloom continuously from the end of June till frost cuts them down.

Seed-Sowing.—For general purposes most half-hardy annuals may now be sown; but it will be wise to save a pinch of seed of each in case of failure. This may be sown a fortnight hence, when it is just possible that the plants will come in very handy in case of shortage.

Nigella.—Although usually treated as a hardy annual, I prefer to treat this as half-hardy and make two sowings, one now, and another towards the end of the month. The variety *Miss Jekyll* is a great favourite. The flowers are produced in great profusion among the graceful foliage, and where cut flowers are in demand I find it stands cutting splendidly.

Stock Empress Augusta Victoria.—This tall, branching Stock is possibly one of the best lavender kinds in commerce. Last season I saw a long border planted entirely with this variety, and it was a sight not soon to be forgotten. It may be sown now and brought on gently, and in planting out give it at least 15 inches to 18 inches between the plants.

Plants Under Glass.

Coleus.—These free-growing plants, so indispensable for furnishing and decorative purposes, are as popular to-day as ever. Cuttings may now be taken from stock plants and rooted in brisk heat. These will root in about a fortnight. No difficulty need be experienced in obtaining the necessary stock, as those rooted cuttings can be cut over to provide another batch. Seed may also be sown at this time, and if the majority of the seedlings are found to be rather coarse, one is always sure to get one or two that are really worth growing.

Petunia.—This old greenhouse favourite is not now so much in evidence as it ought to be, considering its attractiveness. This cannot, of course, be accounted for by any difficulty in its cultivation, as that, surely, is of the simplest. Cuttings rooted now will make very fine plants in an incredibly short space of time. Seed sown now will also produce very good plants in the autumn.

The Hardy Fruit Garden.

Reducing Flowers of Pears.—As Pears usually show an abnormal crop of flower-buds, I think it is a good practice to go over the trees and reduce these just before they open. This will give those that are left a better chance to set. This, at any rate, might be done with the better varieties, as Pears are usually grown on a south or west wall, with, in some cases, a projecting coping, which has a tendency to keep the trees dry at the root. In such situations it will be well to see that they are fairly moist at the roots, as if allowed to become dry at this stage the flowers would most certainly fail to set. The same remarks apply equally to all wall trees.

Raspberries.—These will now be starting into growth. The tips of the shoots may be somewhat shortened, and recent plantations should be cut back to within 6 inches of the ground.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

BULBS FOR SPRING PLANTING OUTSIDE.

SO much accustomed are gardeners and amateurs to ordering their bulbs and tubers in autumn that many are liable to overlook the fact that it is possible, and even advisable, to obtain some of these in spring for planting at that time. Many of them require to be lifted in late autumn and stored until spring. It is unnecessary to enlarge upon this point, and also to speak of such subjects as *Liliums*, *Galtonias*, *Gladioli*, *Montbretias*, *Begonias*, *Tigridias* and other well-known bulbs frequently planted, and upon whose culture separate articles appear from time to time. The bulbs, corms or tubers mentioned here can still be purchased, and may be planted in March or April.

The Agapanthus, although almost outside our sphere, may be mentioned as good for spring planting in the open. Planted deeply and the foliage left on all the winter as a natural protection, it is hardy even in the South of Scotland. *A. minor mooreanus* is by far the hardiest variety.

Albuca Nelsonii, which has white flowers tinted with red, is hardly ever seen, though in warm climates it may be left out all the winter with but slight protection. Plant 4 inches deep in a sunny place. A few

Alliums are obtainable in spring, and the best of these is probably *A. pedemontanum*, with rose-coloured flowers. It is hardy if planted 2 inches or 3 inches deep. Spring is the best time for planting the magnificent

Alstroemerias. They should never be less than 6 inches or 9 inches deep, and a foot is not too much. The hardiest are *A. aurantiaca*, with its lighter-coloured varieties; *A. chilensis* and its varieties, and *A. psittacina*. Less hardy, but very beautiful, are *A. pelegina* and *A. p. alba*. Those who admire the noble

Belladonna Lily (Amaryllis Belladonna) may be reminded that this is a good time to plant the bulbs from 9 inches to 12 inches deep at the foot of a greenhouse or south wall. It is quite hardy there.

Anemone coronaria may still be planted for late blooms. A delightful little bulb not often met with, and hardy enough to plant now and lift in the autumn, is the blood red *Anomatheca cruenta*. It looks best in half-shade, and should be planted 2 inches deep.

Antholyzas are striking plants, with big plaited leaves and spikes of red and yellow flowers. *A. paniculata* is hardy, and *A. crocosmoides* is nearly so. Plant 6 inches to 9 inches deep in a sunny place. Both flower in the autumn.

The singular *Arisæmas* attract some people, and may be planted now. *Asclepiases* may still be planted, and *A. tuberosa* is the best, although not a great success in the North. Plant 4 inches deep. The charming Mexican Coral Drops (*Bessera elegans*), with scarlet and white flowers, may be grown in light soil if planted 3 inches deep. Lift in the autumn and store in dry sand. The climbing

Boussingaultia baselloides, with small white flowers, does well on warm trellises, planted 6 inches deep. *Bravoa geminiflora* (the Twin Flower) is a beauty with its orange red flowers, and should be planted 3 inches deep in a sunny place and lifted in the autumn.

Chlidanthus fragrans, with sweet-scented, yellow, funnel-shaped flowers, is not quite hardy, but may be planted 3 inches deep and lifted in the autumn. *Commelina cœlestis*, blue, is nearly hardy, and may be planted 3 inches or 4 inches deep in light soil. Though fully open in the evening, the white *Cooperia Drummondii* does well in many places if planted 3 inches deep in a sunny place and lifted in the autumn.

Crinums would require an article to themselves. For permanent planting the best are *C. longifolium* (capense) and its varieties, *C. Powellii* and its varieties. Even *C. Moorei* and *C. yemense* are found hardy by some. Plant the *Crinums* about a foot deep.

Cypellas are good for spring planting. Planted 3 inches deep, *C. Herbertii*, deep yellow, and *Cypella* or *Pohlia platensis*, blue and orange, are charming. Lift in the autumn. *Eucomises* may still be planted; *E. punctata* is the hardiest, standing the winter in light soil in many places. *Geranium atlanticum* is a tuberous Crane's-bill for spring planting, but is hardy.

Incarvilleas, now so popular, may be planted with success. *I. Delavayi*, *I. brevipes* and *I. grandiflora* are the hardiest. *Hymenocallis*es are lovely bulbs to plant in the spring and lift in the autumn. *H. Amancæ*, yellow, and *H. littoralis*, white, may be planted in a sunny place 9 inches deep and protected in the winter. The white, August-flowering *Milla biflora*, half-hardy, does nicely 3 inches deep in a sunny place. The *Pancratiums* are exquisite. The hardiest is *P. illyricum*, but *P. maritimum* is almost hardy. Both have white flowers, and can be planted 9 inches deep. *Rigidella immaculata*, scarlet, may have the same treatment as the *Tigridias*.

Tropæolum tuberosum, which is hardy if planted 8 inches or 9 inches deep, is a beautiful climber with scarlet and yellow flowers. The *Zephyranthuses* are exquisite, *Z. candida* being the hardiest, and if planted 4 inches deep at the foot of a greenhouse wall, will thrive. *Z. Atamasco*, white; *Z. carinata*, rose; and *Z. sulphurea*, yellow and copper, are pretty if lifted and stored in the winter.

S. ARNOTT.

POISONOUS PLANTS.

THE number of vegetable poisons is very large, and a striking feature about them is that they are frequently found in plants which belong largely to natural orders associated with health rather than with death. This is strikingly shown in our own country, as well as in lands more associated with deadly vegetation, and it is a fact which may well call for comment. If, as it is supposed, plants develop strong-smelling or dangerous properties in order to ward off their foes, why do not the harmless members of the order do the same? Why are a few Beans—notably the deadly Calabar—so harmful that it is unsafe to purchase foreign bean-meal, while most of the plants of this large and splendid order of plants are designed for man's use? One or two of the Vetches are other instances. It is difficult to say.

It is true that some harmless plants belonging to poisonous families have rather characteristic, and not very reassuring smells, which seem to connect them with an evil ancestry, but probably this wears off somewhat with cultivation (and

tends to confirm what has been said about harmless plants), just as the poisonous nature of some plants undoubtedly gets less or disappears when they are cultivated. Carrots, Parsley, Fennel, notably Celery, Tomatoes and even Potatoes when green bear out this contention, though the last two belong to a notoriously poisonous order of plants.

G. T.

THE MAKING OF A LAWN FROM SEED.

FOR making a lawn from seed, if the sowing should have to be done in spring-time, the ground, if possible, ought to have been dug over during the winter months and allowed to lie in its rough state until it is time to sow the seeds.

By leaving it lying rough, the frost gets a much better hold, with the result, especially if it is inclined to be heavy soil, that a better and finer seed-bed can be obtained. If the ground is in poor condition, some good, old, rotted stable manure should be lightly dug in; but care must be taken not to dig it in too deeply, as it is essential that the roots of the young plants should reach it as soon as possible if it is to be of any use. The

Preparation of the Seed-Bed in spring should be as follows—at least, I have found it the best: Rake the whole surface to break up any clods and also to remove any stones and rubbish. Make good any hollows by filling them up with soil, and also level any high parts, so as to get the surface as even as possible. When this work has been carried out, tread the whole surface, then rake again, and, after this, roll it until it is quite firm and true. When the rolling has been completed, any unevenness will show, and a final levelling can be done. Before sowing, as the seed-bed is now ready, rake over once more, so as to break up the surface to receive the seed. The

Sowing should be done on a quiet day, and when the ground is dry on the top. Scatter the seed evenly all over and rake lightly in every direction so as to thoroughly bury the seed; but when raking be sure not to rake too heavily, as the seeds only require a light covering. Roll all with a heavy iron roller once, then leave it.

Treatment of Young Grass.—When the seeds have germinated and the young plants are just peeping through, do not on any account roll then; but as soon as the grass is, say, an inch or so high, give a rolling to firm the surface, and mow with a good sharp mower so as not to tear out any of the young plants. Set the mower high enough so as just to cut the ends off the grass. Do not on any account let the grass grow too long, as it is not a crop of hay that is aimed at, but a thick, close carpet of turf, and this cannot be better or more quickly obtained than by keeping it down. I would make a strong point of this last matter in regard to mowing. Care should now be taken not to over-roll, and the roller should not be used when it is raining, a time one very often sees the roller in use. This is a fatal mistake, as the grass, like a human being, must have air. It must surely be only common sense that if the ground is rolled when it is so wet on the top, the roots are being deprived of the air and the young plants are gradually being choked. Never roll even an old lawn when the surface is very wet, and never roll during rain, as I am perfectly satisfied

in my own mind that this has been the ruination of many a good lawn and the means of so many weeds making their appearance where there was once a good, clean carpet of turf.

The foregoing remarks are simply a few of the methods I employ, and, I must say, with excellent results, when I lay down a lawn from seed.

PETER W. LEES.

(Greenkeeper, Mid-Surrey Golf Club.)

SEASONABLE NOTES ON GRAPE VINES.

HEAT, DISBUDDING, AND TYING DOWN SHOOT.

SINCE the weather became milder, the heat under glass has been like summer. Grape-growers always like to experience a period of bright sunshine while the Vines are starting new growth for the year. Shoots forced on by artificial

heat during their early stages, when the weather is generally cloudy, are never strong at first, and, of course, that means loss of time. I have also noticed rather smaller bunches, as the main stem of each bunch and stems emanating from it are shorter. The bunches will be compact enough, but to obtain high-class berries many more of them, regarded as surplus berries, must be cut out.

Sun-heat is, therefore, very precious in the vinery. I quite believe that amateur cultivators lose a lot of sun-heat in the springtime. Of course, they no doubt prevent loss of foliage through scorching, but an expert Grape-grower will husband almost all the sun-heat and do no harm thereby to the leaves, but rather benefit them. The inexperienced cultivator loses the heat through injudicious ventilation. If he opens wide the ventilators—often the front ones as well as those at the top of the house—he causes a current of cold air to pass through the structure, and it chills the warmed leaves. Now, how must the amateur ventilate without causing harm, but with good results? He should open the top ventilators about an inch wide just before the sun shines on the house in the morning. Excessive moisture is thus dried up on the tiny leaves before the sun's rays are strong enough to scorch them. About two hours afterwards open the ventilators another inch, and at noon, if the sun-heat increases, another inch. Front ventilation is neither necessary nor desirable. The heat in the structure may be very high, but it will do good, especially if the path and border are damped once or twice. The atmosphere will become quite moist; it will be what is commonly termed "a growing atmosphere." None of this moisture will lodge on the Vine leaves as long as the top ventilators are open. As the sun's power wanes, the ventilators must be gradually closed; finally, not later than half-past three o'clock in case of a house facing due south.

Saving Fire-Heat.—All this means a saving of fuel and the work attendant on stoking, as the fires must be allowed to burn out each morning as the sun-heat increases, and the pipes must again be warmed as the internal temperature goes down after sunset.

Disbudding.—It is always a pleasure to rub out nice fat buds as long as there are plenty of fatter ones to retain, because one knows that the buds left on the Vines will soon gain extra strength. There are, however, many amateur cultivators

who cannot bring their courage to the point of removing enough of the surplus buds. This has often been proved to me, and, of course, the result is overcrowding right from the beginning. On each spur leave one shoot well placed and, of course, bearing the best bunch of Grapes, as the tiny bunch can readily be seen in the point of a shoot an inch long. The thinning out of the bunches will be a matter to claim attention some weeks later on. All the disbudding must be completed when the shoots are from 1 inch to 2 inches long.

Tying Down the Shoots.—It is wonderful how quickly the shoots grow at this season, and they always point towards the roof glass. The ends of the shoots would be crippled if left for long touching the glass; this should not happen. The young bunches would also be chilled. To prevent any check, commence tying down the shoots just before they reach the glass. Simply bring down the point a few inches; then further in a few days' time, and, when the Vines are flowering, do the final tying to the horizontal bars, as the shoots will stand the strain without snapping off at that stage.

AVON.

SWEET PEA NOTES.

THE present month is of vast importance to all growers of Sweet Peas. The seedlings require careful attention, while the soil which was trenched in the autumn will be greatly benefited by a top-dressing of soot, superphosphate of lime and bone-meal, and a close vigilance must be kept against the ravages of frost, mice and birds; for, should a mishap occur from any of these causes, it is getting almost too late for fresh sowings to be made to produce blooms for exhibition purposes.

Autumn-Sown Plants.—Thus far the winter has been most favourable, and never have I seen plants in a better condition. Of course, it is in March and April that we expect to see the autumn-sown plants "leg along," and the past sunny days have worked their magic charm and vigorous side growths are pushing up well; in fact, all the omens for future success are "set fair." However, it is too early to expect winter to have departed, and sharp frosts must be looked for, so it is necessary to provide protection at night and to give all reasonable care to prevent unnecessary checks occurring. A strong, short-jointed, healthy plant, well able to withstand bad weather when it is planted out, should be the ideal of all growers. To attain this the growing plants will need plenty of space, and on no account must they be allowed to become spindly and drawn, or matted together in a confused mass. See to it that twigs are placed around them before they can topple over, as it is folly to neglect to give them adequate supports. Prevention of trouble is much better than trying to effect a cure, which, in the case of Sweet Peas, is seldom efficacious. An excellent plan, if the grower can give the necessary time and trouble, is to treat every seedling as he would a rooted cutting, *i.e.*, pot it into a 3-inch pot, using good loamy potting soil. I like doing this in early February, and have always found the plants greatly improved thereby. For a few days after repotting I keep them close, but the plants soon get away with renewed vigour. However, by the time these notes are printed it will be rather late for this course to be adopted, yet it

is a plan well worth following, especially if exhibition blooms be the end in view; but in growing for ordinary decorative purposes it is not necessary.

Spring-Raised Plants.—The hardening off of these plants should be gradual, but it is a great mistake to keep them too long in a warm, moist house, and especially if it is not possible to place them within a few inches of the glass; therefore, directly the fourth leaf appears, transfer them to a cold frame, although, of course, common sense must be used in giving them air, as it will not be advisable to expose them fully to the bitterly cold winds so prevalent at this time of the year. Above all things avoid producing a weak, attenuated plant, and such plants are more common from a spring sowing, as they have been grown quickly in a warm, moist atmosphere, whereas those sown in the autumn have braved the chills of winter and altogether are hardier.

Method of Hardening Off.—Perhaps a few words on this will be helpful. The plants, when 3 inches or 4 inches high, should be placed in a cold frame, the lights of which are kept closed for a few days except during bright sunshine at midday, and at night a mat should be placed over the glass. (Some of my readers will rightly say I have often written that Sweet Peas will withstand several degrees of frost. Quite so; yet I do not think it wise to expose tender and oftentimes rare seedlings unnecessarily; hence the foregoing advice.) After ten days of this treatment the plants should be accustomed gradually to harder treatment, avoiding exposure to biting cold winds, and by the beginning of April the lights should be removed altogether, the plants now being sturdy and strong, capable of weathering the adverse climatic conditions they may have to encounter.

Pests.—To frustrate the attacks of birds, mice and slugs, vigilance is the chief weapon. The old-fashioned remedies of cotton for birds and chloride of lime dusted outside the box or frame to keep away mice are effective if applied before the damage is done; but too often these precautions are taken when the crop has been severely mauled.

Soil.—The top-dressing of soil which has previously been trenched is of great importance. This must not, of course, be overdone, but a good dusting of soot, bone-meal and superphosphate should be raked in. I have tested several of the "special manures" that are in commerce, using them instead of the soot, superphosphate and bone-meal, and have found them very good. A fortnight previous to planting I used 20z. of Dobbie's Sweet Pea Manure to every circle of 2 feet diameter, and 20z. of Clay's Fertilizer to every yard in rows, and had excellent results from both. I must mention that good farmyard manure had been well incorporated into the soil during the trenching operations, and the soil had been well pulverised. The texture of the soil has a deal to do with the success or failure of experiments of this kind; but every soil which has been well prepared in the autumn will readily respond to the extra nourishment given by a liberal surface-dressing of soot, bone-meal, &c., or the specially prepared manures for Sweet Peas as advertised in THE GARDEN.

Summer Feeding I will deal with in a future article, as it is an important cultural factor, the misuse of which causes much trouble in bud-dropping, rank, sappy, flowerless growths, and kindred ills.

S. M. CROW.

THE GARDEN.

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MARCH 21, 1914.

NOTES OF THE WEEK.

Protection of Fruit-Buds.—Now is the time when birds do such damage to the buds of the majority of fruit trees and bushes, and means must be taken to ward them off. An occasional spraying with Quassia Extract or any substance that will make the buds unpalatable will to a certain extent stop them.

Planting Forced Bulbs.—A very pleasing effect may sometimes be produced by planting forced bulbs in the wilder parts of the flower garden or shrubbery. These should be planted as soon as possible, as if left until the autumn most of the foliage has died down, and it may just happen that the bulbs are planted too near to a previous plantation.

Transplanting Pentstemons.—The young plants should now be taken from the frames and transplanted in some sheltered spot that has previously been prepared. If some leaf-soil has been forked in, this will not only assist root action, but the plants will lift with much better balls of soil at planting-time. Should severe weather set in, they will require a little protection, say, of Spruce branches.

Sowing Primula sinensis.—To be of any value for autumn decoration, seeds should be sown about the middle of March; and although this Primula requires very little heat during the growing season, it is well to sow the seeds in a temperature of 60°. Prick out the young plants as soon as large enough to handle, keep close for a few days, and water with great care. Clean, well-crooked pots are indispensable, and the soil for future potting may consist of turfy loam and leaf-soil, with plenty of sharp sand to keep the compost from becoming sour.

Saxifraga oppositifolia.—This is one of the most beautiful of early flowering Saxifragas or Rockfoils. A rich mass of its rosy purple flowers on a ledge in the rock garden is very beautiful at the present time. It is one of our rare British flowers, being found in some of the hilly parts of Wales, Scotland and Ireland. There are several beautiful varieties, some with larger flowers or of a deeper colour, as well as a pure white variety, alba. All of the varieties succeed in a well-drained, sunny position, in soil composed of good loam, peat, sand and a few granite chips.

Planting by the Lakeside.—This is the time to make plantations of moisture-loving plants on the banks of streams or ponds. There is no scarcity of plants suitable for the purpose, which may include bold clumps of Iris, of which there are many charming varieties to choose from. *Sparganium angustifolium* may be planted close to the water's edge. *Lythrum*, *Senecio*, *Rodgersia podophylla*, *Aspidistra regalis*, *Gunnera scabra* and *G. manicata* are noble plants, and well suited for the water's

edge. *Myosotis* and *Primula japonica* may be freely planted, and will produce a very pleasing effect, but must be placed well up the bank.

The First Clematis to Flower.—*Clematis calycina* is the first of the genus to flower, often commencing in January, and for this reason it should be grown more than it is. The pendulous flowers, which are borne in the leaf-axil, are 1½ inches in diameter, the petaloid sepals being of a yellowish white, faintly spotted on the inside with reddish purple; and although the flowers

planted out carefully, little damage need be done to the roots. By adopting this method one has a reasonable chance of getting them into bloom with the other bedding plants.

Pruning Roses.—The majority of Roses may now be pruned. Notwithstanding the great advance made in Rose-growing during the past year or two, it is surprising to see the number who still persist in pruning their Roses as one would a hedge, all shoots being cut over, big and little alike. Expert Rose-growers know the peculiarities of each variety, and will prune accordingly. But for those having only a miscellaneous collection, the following rule may be followed: Cut clean away all weak and sickly shoots, leaving only matured shoots of moderate thickness, and these may be cut back to within 4 inches to 6 inches of the base.

Dividing Aspidistras.—Few plants are more useful for house decoration than the Aspidistras, especially where gas is used. Both *A. lurida* and its variegated form are equally hardy, and with a little attention will flourish in out-of-the-way positions, where most other plants would quickly collapse. The present is a suitable time for the propagation of these useful plants. Take the old plants that are to be divided and pull them to pieces with one or more leaves on, according to the number of plants it is desired to make, and then pot them up in a mixture of fibrous loam, leaf-soil and sand.

The New Director at Wisley.—Just as our last issue had gone to press we received a notification from the Royal Horticultural Society to the effect that Professor Keeble, F.R.S., of University College, Reading, had been appointed Director of the gardens at Wisley. It will be remembered that at the annual general meeting of the Fellows held in February last the Council were empowered to spend some of the surplus funds for the purpose of developing the gardens on scientific lines. We understand that Professor Keeble's duties will include the general guidance and supervision of the trials, teaching and research. It is pleasing to learn that Mr. F. J. Chittenden will remain in charge of the educational section, where he has already done a great deal of good work, and that Mr. S. T. Wright, the superintendent, will still supervise the practical work. We wish Professor Keeble every success in his new sphere, and hope that he will always remember that practical horticulture is of far greater importance to the Fellows of the society than purely scientific research, which is already being carried out in many other directions. There is a danger of unnecessary overlapping in many of the experiments that are being conducted in different establishments.



PROFESSOR KEEBLE, THE NEW DIRECTOR AT THE ROYAL HORTICULTURAL SOCIETY'S GARDENS.

may not be termed showy, they are, nevertheless, distinctly pretty against the handsome dark bronzy green, finely cut foliage. Although hardy, it should be given a south wall, as this enables the wood to get thoroughly ripened, which is essential for a good display of flowers.

Treatment of Gladioli.—There seems to be a great diversity of opinion as to the treatment of these stately flowers. Some advocate potting the bulbs, and, where space is plentiful, this method has much to commend it. Others, again, plant the bulbs where they are to flower, and in early districts this would seem to be the better method of the two. But in cold and late districts it is preferable to place the bulbs in ordinary cutting-boxes now, and stand them either in cold frames or in a cool house. If well hardened off and

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Borders of Lavender and Pinks.—In this damp climate the common and Dutch Lavenders are very apt to die off in big pieces in the spring. To avoid bare spots we put in single Pinks from cuttings all around the plants, hoping they would grow up and through the grey bushes. The result of the experiment in its third year can be seen in the accompanying picture. There are three shades of pink in the flowers and three shades of grey, including the stone paving, so there is no monotony in the scheme. The Pinks lasted in bloom more than six weeks last summer, and filled the small garden with fragrance; and the Lavender, we find, gives out its scent even in winter.—ROSA TANGYE, *Westmere, Edgbaston.*

Tall Antirrhinums.—As I consider the better varieties of these plants among the best of

able article on page 131 and page 132? I am sure it is known to very many of your readers. It might appropriately be described as a bicolor, but the colours (pale rose with white) are so soft and blend so well that it is a general favourite.—F. R. H. S.

Lachenalias as Room Plants.—Few take the trouble to grow these bulbs well, and the results, in consequence, are poor, and then they are not appreciated. I try to do what I can for them, and I am rewarded. I had a beautiful pan of *L. Nelsonii* in my study for no less than twenty-two days last February. I live in the room every day, and at night, with the oil lamp and fire combined, it gets pretty warm (of course, no gas). Is there any Hyacinth, Tulip, Daffodil or Narcissus that will go on so long under like conditions? *Nelsonii* is good, but give me the rich deep orange yellows of Rose Barton and the larger-flowered and more open bells of St. Patrick. This latter, coupled with Shiner and John Geoghegan, I put at the very top of Sir Frederick Moore's striking

white eye or centre. Both are well worth growing. They are equally floriferous, not only under pot culture, but when bedded out during the summer months, under which conditions I have met with them in several instances within the last two or three years.—H. P.

Myosotidium nobile Flowering in Scotland.—There is a nice specimen of this rare plant, which was sent from a Cornish garden last autumn, in flower here at present. It subsequently lost all its leaves, but these were renewed during the winter. It is a lovely flower, and one would be glad to know if it seeds freely from self-fertilised seeds, or if these are fertile if and when produced. I would like to see it prospering in a warm corner in the open. Has anyone in the North, in the Rhyns of Galloway, for instance, or in the Black Isle, succeeded with it in the open? Another of our treasures, a Primrose of a peculiarly nice shade of green, found by Lady Grisell Baillie-Hamilton, is also in flower. The original plant prospered so well at one time that plants were given to several gardens, leaving a nice lot for this garden. But they suddenly gave way, and I could with difficulty save only three pieces from the general doom, and, strange to say, every plant of those dispersed went the same way. It was equally vexatious to lose at the same time a small piece of a double green the late Peter Barr favoured me with.—R. P. BROTHERSTON, *Tynninghame, Prestonkirk.*

Miniature Hyacinths.—Reading the note on miniature Hyacinths by the Rev. J. Jacob on page 114 of March 7 issue, it seemed very strange that he accurately describes another variety under the name of Orange Boven, namely, the so-called yellow Roman Hyacinth. This variety is seemingly a true Roman, being thin, tall and stiff of stem, with medium-sized bells lightly and sparsely arranged. The flowers are delicately perfumed, not so strong as the white Roman, and for cut purposes even better and far preferable to the general run of miniatures, which sometimes, at least, are quite nasty things, both as Hyacinths and flowers. The yellow Roman does not force quite so early as the white variety, and makes a much prettier pot plant. The colour, again, is not yellow, neither is it orange, but there are shades of both. Yet another Hyacinth that on its merits deserves a note of recommendation is a French variety called Couleur de Chair. It forces rather easier than the miniature forms, and is a much better pot plant. It is very good as a February flower, and of a delicately shaded rose colour, rather too deep for flesh, as the name would suggest. Grown three or four bulbs in a pot, it makes a charming and welcome effect during a month when flowers are greatly needed, especially of that colour. A word concerning Tulips may not be out of place. How many are there who, having to maintain a wealth of cut flowers, think of forcing varieties of Darwins! Some of these, by reason of the long stems and large leaves, are very suitable for cutting, and look exceedingly effective, the colours being of varied and contrasting hues. A few worth mentioning are Rev. Ewbank, Mrs. Farncombe Sanders (brilliantly beautiful), Mme. Krelage, Glory, Pride of Haarlem, Fra Angelico, Harry Veitch and Orion. One of the sweetest Tulips in cultivation, and suitable to be grown in pots and for gentle forcing, is Orange King, a May-flowering type and exquisitely scented. The rich colour alone is sufficient to recommend it.—H. R., *Twickel Castle Gardens, Holland*



BORDERS OF THE COMMON LAVENDER AND PINKS IN A READER'S GARDEN AT EDGBASTON, BIRMINGHAM.

hardy plants, I was much interested to read the article by Mr. Brotherston on page 131 of your issue of March 14. He mentions with approval some plants having spikes 7 feet high, and seems to have a contempt for those of normal size! This is rather strange, bearing in mind that the intermediate section, growing about eighteen inches, is just now the most popular and contains some of the best varieties. Surely these and the ordinary tall varieties are incomparably more beautiful and more useful than such monstrosities as your contributor mentions. I find Antirrhinums can be grown as hardy annuals with very fair success, the seeds being sown in a glass-covered box in March, without artificial heat. Good loamy soil should be used to ensure quick growth. Some plants I raised in this way last season bloomed, in poor soil, for quite two months, and made fine, large, branching plants.—G. L. J.

—Why does Mr. Brotherston omit Antirrhinum Cottage Maid in his comprehensive and

creations. August potting, light, rich, well-drained soil, air and a moderate temperature and thorough ripening are the main factors in successful culture.—JOSEPH JACOB.

The Shrubby Browallias.—There is a great tendency to regard all Browallias as annuals; indeed, the shrubby-growing *B. speciosa* major was recently referred to in THE GARDEN as an annual. Though seed is readily obtainable and seedlings grow away readily, there is no need to depend solely upon this mode of increase, as cuttings root without difficulty, and plants so obtained will flower in quite a small state. As a decorative plant *B. speciosa* major well merits all that your correspondent says in its favour, for it is almost continuous blooming. A second species, *B. viscosa*, which is also described in some horticultural works as an annual, is of as pronounced a shrubby character as the other. From *B. speciosa* major this species differs in the flowers being smaller, and in colour a deep blue with a

Peat Moss Manure.—In the most interesting letters that have appeared in the pages of THE GARDEN on this subject, all your correspondents seem to have overlooked one great fault in its use as manure, viz., the quantity of weeds that invariably follow wherever it is dug into the ground; at least, that is my experience. At one time it was used in the stables here. Mixed with the straw manure I found it very good for nearly all green crops, except for the trouble of the weeds, especially a variety of Sow Thistle, which no amount of heating or fermenting the manure-heap seemed to destroy the vitality of its seeds.—H. REYNOLDS, *Scratby Hall, Great Yarmouth.*

Lime in the Garden.—I have been very much interested in reading in THE GARDEN of February 28, page 111, an article by Professor Houston on the uses of lime in gardens. The last paragraph was, however, a great surprise to me, as he states there that lime must not be used in planting Potatoes. My experience is to the contrary. Last year my gardener, when planting Potatoes in drills 9 yards long, spread in each 1½ st. of freshly ground lime, and then covered it over with soil. The Potatoes were all sprouted at the time. On lifting them in the autumn the average yield was 5st. to each drill. The quality of the Potatoes has been exceptionally fine. I have constantly remarked during the winter how good they were. I have had lime recommended for dressing the lawns in the spring. Can any gardening friends tell me if they have tried it, and with what result, and also what quantity should be applied?—J. D.

Sparrows Eating Yellow Crocuses.—In your issue for March 7, page 113, there is a note on the damage done by sparrows to yellow Crocuses, and it is remarked that other colours are left alone. I have seen it suggested that some sweet juice is found by the birds in the petals and stems of the flowers; but this is hardly probable, as the behaviour of sparrows when tearing the Crocuses to pieces suggests annoyance rather than pleasure. Nor are Crocuses the only flowers injured in this manner. Polyanthus often suffer severely, but the pale shades are never attacked so ferociously as the bright colours or those rendered conspicuous by a dark ring. According to my experience, the reason is to be found in the effect of bright yellow upon the birds. Those who have studied the subject of colour will know that red inspires fear in birds and animals, while yellow appears attractive, but often arouses excitement amounting to irritation. I have known a brood of chickens thrown into a state of panic by the sight of a red object, while they pecked with excited curiosity at a yellow one. It is puzzling to say why birds should molest some yellow flowers while others, equally bright, are left alone; but some plants, such as Winter Aconites, probably possess an acrid juice distasteful to birds, while smaller subjects, such as Tulips, are more difficult to injure than those nearer the ground. Spring flowers, naturally, suffer the most, because later in the year the greater predominance of colour in the landscape would prevent a single species from attracting much attention. Birds, too, are in a far more excitable state in the spring, and weather conditions may explain why more damage is done one year than another. It is strange that some gardens should suffer more than others, but the position of the flowers may in some cases keep the birds from attacking them. I myself have noticed that Crocuses when planted in

small clumps are more severely injured than those planted in large sheets; but the whole subject is full of interest, and possibly some of your readers can throw more light upon it.—(Miss) E. A. PATCH, *Aldbourne, Wilts.*

Saxifraga burseriana and its Varieties.—With further reference to *Saxifraga burseriana*, "Alpinist's" note on page 114 of March 7 issue raises an interesting question, which, I think, it is most desirable should be discussed and answered authoritatively before the forthcoming Saxifrage Conference. I refer to the question of whether the Saxifrages commercially listed and sold as distinct varieties of *S. burseriana* are, in fact, distinct. I think that I can solve one at least of "Alpinist's" doubts. At the present moment there is in flower upon a moraine in my garden a plant of *S. b. Gloria*, one flower of which can just, and only just, be covered by a half-crown piece. This plant has not been disbudded. It is true that it is a very small and youthful plant, and has thrown a single flower-stem only, but upon that stem it has at least two, and possibly three, flowers. Among the thousands of the finest possible examples of *S. burseriana* type which I have examined, I have never seen any single flower making any approach to such a bloom of *S. b. Gloria* in point of size. I think that "Alpinist" may be basing his judgment, as I have sometimes done, upon specimens purporting to be *S. b. Gloria*, *S. b. major* and so forth, which in reality are nothing of the kind. An important point to be borne in mind is that *S. b. Gloria* does not come true from seed. Now, I fear it cannot be disputed that seedlings of *S. b. Gloria* are frequently sent out as *S. b. Gloria* itself. As at present advised, I am unable to find any definite differentiating feature in the so-called variety *S. b. major*. My own *burserianas* (type) are in every way superior to a batch of *S. b. major*, which I was misguided enough to purchase at a price considerably higher than the current price of the type; and I am decidedly of opinion that the ever-increasing multiplicity of names is, from every botanical and horticultural point of view, unjustifiable. But in the case of *S. b. minor* there is no longer the least doubt that the matter is different. *S. b. minor* is at least a fortnight later than the type in flowering. Its habit is altogether distinct, being compact and cushion-like, while its flowers are very much smaller, and borne upon shorter and more slender stems. It has been suggested to me that there is a difference in the number of anthers in these varieties; but this is not so, since in all forms the number is normally ten. I must not trespass further upon your space to go into the questions aroused by *S. tridentata* and so forth; but I should, in conclusion, like to draw the attention of your readers to a delightful novelty which I saw upon Mr. Tucker's stand at the meeting of the Royal Horticultural Society on the 24th ult. This form is named *S. crenata*. As its name implies, it has crenated or notched edges, and is both dainty and altogether distinct from any other form.—RAYMOND E. NEGUS, *The Lawn, Walton-on-Thames.*

FORTHCOMING EVENTS.

March 24.—Royal Horticultural Society's Exhibition: Lecture at 3 p.m. on "Pruning Shrubs," by Mr. E. Beckett, V.M.H.

March 26.—Manchester and North of England Orchid Society's Meeting. Royal Botanic Society's Meeting.

PRUNING ROSES.

WHY IT IS NECESSARY.

PROBABLY there is no subject that has been so much discussed and written upon as pruning Roses, and yet, judging from letters received, there are numbers of readers quite at a loss to understand its mysteries.

And yet there should be no mystery, for the most casual observer of our wild Roses will see that Nature has endowed them with remarkable recuperative powers, so that when old growths have exhausted themselves by abundant blooming, there are other and younger growths springing up from the base to carry on the decorative work. It is the same with our modern Roses. Let anyone examine a well-grown bush or standard, and he will observe several fine shoots that have emerged close to the base of the plant, and which seem to appeal to us to cut away some of the older growths to afford them light and air wherein they may develop.

What to Cut Away.—As to how much one should prune back a certain Rose only needs a little observation to determine. Surely, where Nature has given a Rose, such as Hugh Dickson, the power to send up a growth from 7 feet to 12 feet in height, it would be madness to cut such a growth as close down as one would a Rose of the type, say, of General Macarthur. I would, therefore, while giving some general hints, counsel readers to observe for themselves, and, above all things, if the work of pruning must be relegated to that much-abused man, the "jobbing gardener," see that the plants are not all shorn alike, as if some sheep-shearer had been at work.

An instance of what I might term "unorthodox" pruning came under my notice a year or two ago. A large collection of garden Roses, planted two years previously, had made splendid growth, and as the winter was a mild one, the gardener determined he would not prune severely. All the previous year's growths were retained almost full length, and merely old wood cut out. The result was a glorious mass of bloom. The evil of this practice would be that the plants would not produce such good basal growths as they would have done if pruned more severely, so that another year the plants would be somewhat unshapely, unless care were taken during the summer to prune back some of the growths. I am quite persuaded that if we were sure of our winters not harming the wood, many of our glorious Tea and Hybrid Tea Roses could be allowed to grow into quite huge bushes, feeding them generously, of course, so that the extra demands upon the plants' resources could be satisfied. It seems like a fairy tale to read of plants of Papa Gontier and such-like Roses growing into bushes larger than Lilacs in the sunny Riviera, where they may be seen lining railway tracks, overtopping fences, &c. I have seen something similar in sunny Devonshire, so that all who are fortunate enough to dwell in such salubrious districts must not treat their Roses as becomes necessary to those who dwell in a colder part, for it is absolutely fatal to successful Rose culture to attempt to obtain blooms from growths that have had their pith browned by frost. I believe the retention of such wood has caused many disappointments. I think it was at Ulverston that about two years ago an amateur exhibited some of the grandest blooms of Mrs. Foley Hobbs that have ever been seen, and they were cut from unpruned bushes growing near

the sea among Apple bushes. The Roses had been highly fed with chemical manures, and there they were, a feast for the eyes.

We frequently, in cottage gardens, meet with most remarkable specimens of La France and other Roses that have had very little pruning, specimens we have all envied, which have left us pondering that we who make Rose-growing our profession have much to learn, even from the humble cottager. It is much a case of environment. Notice how a plant of Marie van Houtte will attain to a height of some 20 feet when upon a congenial wall; whereas the same variety in the open would need to be hard pruned if the winter happened to be severe. Walls for such Roses should be reserved, wherever possible, and I hope soon to see Roses of the type of Lyon, Rayon d'Or and Willowmere luxuriating thereon, for I am inclined to think the beautiful tribe, the Pernetianas, are peculiarly adapted to such a purpose.

Spring Frosts.—Unfortunately for us, there is always a big "but" to remember. What a glorious show of Roses we might have "but" for the blighting May frosts! How promising the growths are now breaking; it seems a crime to prune them away, and yet, if retained, we might have all spoilt by the cruel frosts of spring. This year, especially, we must harden our hearts, for I think I never saw the Roses so forward as they are now, the beginning of March. We know only too well the result of May frosts upon forward growths, namely, deformed, green-centred blooms, and it is wisest to prune to dormant eyes Roses that are growing in exposed districts. Every reader must determine what his object is in growing Roses—is it for exhibition or for garden display—as from his determination in this respect must his pruning be regulated.

The Grower for Exhibition must prune severely. One cannot, as a rule, have quality and quantity. Many growers of garden or decorative Roses find it best to plant more closely together, so that they may have both, and in a great measure they succeed; and, of course, the Roses can be as they should be, replanted every three or four years.

The Method of Pruning should be to cut out all old worn-out growths; then completely cut out soft, pithy shoots, produced very late in the season. This will leave us with two, three, four, and perhaps more good sound growths—growths that have more solid wood than pith, and it is from such growths our best Roses come. Amateurs are terribly afraid to thin out the shoots. One often meets with standard Roses whose centres are crowded with innumerable small shoots, quite useless, and which, if allowed to remain, form a splendid hiding-place for the numerous foes of the Rose.

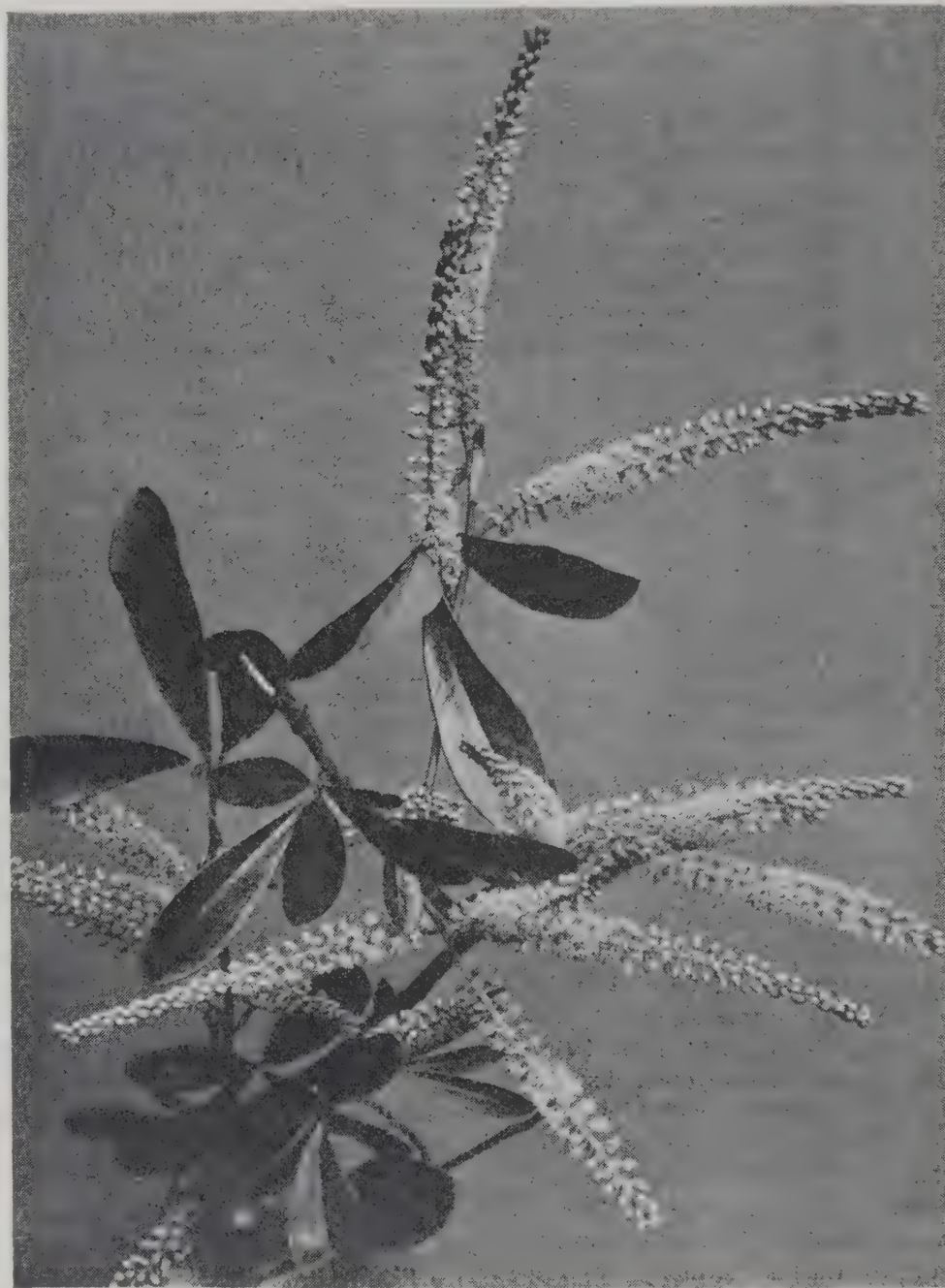
DANECROFT.

(To be continued.)

A LITTLE-KNOWN SHRUB FOR A SHELTERED POSITION.

CYRILLA RACEMIFLORA.

THIS interesting shrub is a native of North Carolina and Florida, and is also said to occur in the West Indies. Though first introduced as long ago as 1765, this Cyrilla is a rare plant in gardens. This is no doubt due to the fact that it is on the borderland of hardiness, requiring in the London district to be grown in a sheltered position, though no doubt in company with other rather tender subjects it will flourish in the gardens of the South and West. Growing wild, *Cyrilla racemiflora* is said



FLOWERING SPRAY OF CYRILLA RACEMIFLORA, A RARE SHRUB IN GARDENS.

to be a small tree, but at Kew it forms a small, evergreen bush, bearing in August and September slender, cylindrical racemes of small white flowers 3 inches or 4 inches long. The leaves suggest those of a Privet bush, and the inflorescences those of a shrubby *Veronica*. This species is sometimes referred to as *C. parviflora*, it is indeed an attractive shrub when in flower, and is worthy of a place in any favoured garden where uncommon shrubs are cherished. *Cyrrillas* flourish in light, sandy loam, peat and leaf-mould. They are propagated by cuttings made of the semi-ripe shoots in late summer and inserted in a propagating-frame with slight bottom-heat.

SHRUBS FOR PRESENT PLANTING.

ALTHOUGH most people like to cease work connected with the transplanting of shrubs early in March, in order that there may be no disturbing element to mar the effect of spring flowers in shrubbery or pleasure ground, there is no reason why, under certain conditions, the work should not be prolonged until early April; while with some kinds of evergreens it is even wise to delay it until the end of April. When people change houses in March, it is often a case of conducting planting operations late in the month or leaving their gardens in an unfurnished state until autumn. Moreover, it is their only chance of transferring special or favourite shrubs from one garden to another; and, providing the work is conducted in a careful manner, there is no cause to fear that the results will be unsatisfactory. It is necessary, however, to observe more than ordinary care at this season in the performance of the work, for it must be remembered that both roots and shoots are in active growth, and any considerable exposure of the roots would be harmful.

Transplanting.—The first point to consider is the preparation of the new sites, and these, together with a plan of the planting or arrangement of the shrubs, should be ready before the plants are disturbed. Then on a mild and, for preference, a moist day dig up the shrubs and transfer them without delay to their new quarters. If they have to travel any distance, be careful to protect the roots with damp canvas or other material; even when they are only likely to be exposed for a short period it is wise to cover them up with canvas. Whenever a ball of soil can be moved with the roots it is wise to do so. If some of the plants show signs of growth and the buds of others are not pushing, move the more advanced ones first, for the earlier they are settled the better. When planting, it is a good plan to place part of the soil about the roots, then give a good watering, allowing the water to thoroughly soak both the soil and the roots. The remaining soil may then be filled in. Should the weather be dry and sunny, it will be found advantageous to syringe the bushes once or twice a day for a week or two. This will add to the labour, but in the end it will be found to be time well spent. When shrubs have to be moved a considerable distance, which means a journey by train or road, additional care is needed to make sure that the roots shall not become dry. Take up the plants carefully, and, if balls of soil are attached to the roots, wrap each one round

separately with damp hay, afterwards sewing it up in damp canvas or matting; but if the plants are removed without soil, a number of them may be made into a bundle. First lay a strong bast mat on the ground, over it place a little damp hay, then, after tying the top of each shrub into the smallest possible compass, lay the plants on the mat one above another, placing a little damp hay round the roots and a little among the branches. When a sufficient number have been placed together, lay another mat over them and sew them into a close bundle. On arrival at the new garden, unpack them carefully, and give the roots a good watering, if they appear in the least dry, before they are planted. When it is known that deciduous shrubs may have to be moved late in March, it is a good plan to lift them and lay them in again in a shaded position with a northerly aspect. This will have the effect of checking growth and making the buds at least a fortnight later in breaking into growth. When bushes are large and dense, it is a good plan to remove a few branches when the transplanting is in progress, which will relieve the injured roots of a portion of their work. Where evergreens are concerned, it is also wise to remove a certain amount of branch growth at any period when transplanting is conducted, and if branches cannot well be spared, then the leaf surface may be reduced by stripping off a quarter or even half of the leaves.

The transplanting of small shrubs at this period is not a troublesome business, and a great deal of transplanting in nurseries is carried on during April. When, however, it is possible to transplant at an earlier date, it is wise to do so, for, the earlier the plants are established, the less trouble are they in the event of the occurrence of a dry spring or summer. Newly planted shrubs, and particularly those which have been disturbed in March, are benefited by being provided with a mulch of decayed manure or leaves towards the end of April or early May. This will have a good deal of watering, in addition to keeping the soil cool about the roots.

Roses are, perhaps, as difficult as anything to deal with at this period, more particularly the climbing kinds, for growth has been going on for some time. The best plan to adopt is to cut them well back as soon as they are planted. In the case of climbers the flowers will be sacrificed, but it is doubtful whether they would mature in any case, and, by this severe pruning, the prospects of good growth for the succeeding year are greatly increased.

Regarding deciduous and evergreen shrubs, there are few kinds which cannot be dealt with now; while Magnolias, Portugal Laurels, Evergreen Oaks, Hollies, Bamboos and a few other subjects may be conveniently left until the end of April. At no time must the roots of shrubs be allowed to become dry, and even though the roots are out of the soil for a short time only, they should be covered over with mats in the manner above described.

D.

HARDY HEATHS.

(Continued from page 131.)

VISITORS to the Scottish Highlands who have perhaps been expending large sums of money in importing to their Southern homes huge quantities of stone and other ingredients for the construction of rock gardens cannot fail to be impressed by the many ideal and natural positions to be seen almost everywhere on the slopes of the Grampians. The boulder-strewn surface provides all the necessary material close at hand, and the clear and bracing atmosphere should, one would think, provide the most congenial conditions that could be found out of Switzerland. In the hands of Nature the contour of these positions is so fashioned that the services of a landscape gardener or artist would be considered superfluous. In a lovely

trickling over the crest of the hill, apparently midway between earth and sky, and gathering force as it descends to join the river below. It passes within 50 yards of the house, and besides supplying the water for domestic purposes, will be utilised in forming water and bog gardens. Near the house and towards this stream the ground is fairly level for a bit; then it falls abruptly to a practically level space on the side of the stream. The latter will be the site of a water and bog garden, surrounding which and rising out of it will be the rock garden, and beyond we hope to construct our Heath garden.

The natural Heather at this point will be all cleared away and the soil enriched to admit of us giving a fair start to the more select varieties of hardy Heath that we propose planting. These will be disposed in large patches, finding suitable pockets among the natural boulders that are freely distributed over the whole area. Additional



AN EFFECTIVE GROUPING OF THE WHITE CORNISH HEATH (ERICA VAGANS ALBA).

glen among the Grampian Hills, and just on the fringe of the domain of "King Grouse," a summer residence, which to all appearance would suggest to the stranger a shooting lodge, has been erected.

The situation, on a slight eminence, and formerly the site of a small Highland clachan long since fallen into decay, has been selected in order to command some of the prettiest views to be found in this wild and rugged country. Away to the south, as far as the eye can reach, the hills on each side of the valley gradually diminish in size until they emerge on the large and fertile valley below. To the north and east the hills rise abruptly, until their distant peaks appear snow-capped and uninviting, unless to the hardy mountaineer; but during the autumn the whole is transformed into a sea of purple, relieved on some of the lower stretches by small plantations of Birch.

Looking eastwards and upwards, a mountain stream can be discerned in the distance coming

stones, if wanted, can be easily procured by sliding or rolling them down from a higher level. Some slight shelter from the biting winds that frequently sweep down the glen will be afforded by means of a belt of Mountain Pine to the north and east of the site, and the formation of our Heath garden will be so arranged that the artificial plantation will merge and lose itself in the expanse of the native plant. With the aid of some turf, cut and stacked with a plentiful mixture of manure, we possess all that is necessary to ensure a suitable compost in the event of the natural element being insufficient. Like many of the alpine plants which live on a very meagre diet in their native hills, yet take kindly enough to treatment in a rich soil, the Heaths, when transported from their homes, appreciate a much more liberal fare in the way of good soil and manure than one would expect from the conditions in which they are found growing naturally.

Possessing such a suitable position and with an unlimited boundary, a full collection represented by large breadths of each will be planted, and no formal arrangement will be attempted. A few flat stones at convenient distances will be laid in order to form comfortable pathways throughout the plantation. Beginning our planting nearest the rockery, the choicest of the dwarf varieties will occupy suitable pockets there, and we anticipate an unqualified success with such varieties as *Erica vulgaris alba*, *E. v. a. flore pleno*, *E. v. a. minor*, *E. v. aurea*, *E. v. argentea*, *E. v. cuprea*, *E. v. decumbens alba*, *E. v. pilosa* and *E. v.*

ASTER DISEASE: A PREVENTIVE.

PROBABLY a large number of gardeners have asked themselves of late, or will do so during the next few weeks: "Is it any use sowing Asters?" There is not the craze for them that there is for Sweet Peas, but Asters and Stocks are our most popular half-hardy annuals, and are looked upon as indispensable in most gardens, so that many may be glad to

as Carrots or Onions are sown; the resulting plants are neither transplanted nor thinned out, only kept clean, and on good soils the blooms seem in no way inferior to those from plants reared under glass, but flower somewhat later. This is one drawback to the method, as it is imprudent to sow outside until more genial weather prevails; but in the South it should not make much difference, while in colder districts the protection of a Violet frame or hand-lights is advisable until the seedlings are up. A fine tilth is desirable, as good Aster seed is not cheap, and if the bed is at all rough a percentage of the seed will be wasted; but if a

dry autumn occurs, a large quantity of Aster seed can often be gathered, which has its advantages when spring recurs. The flowering period is later, and forms a succession to the plants bedded out, or the survivors of them.

Why Aster plants treated in this manner are immune from disease I do not know, and can only state it as a preventive I have proved during the last three summers, which have been a severe test so far as climatic conditions are concerned. During this time I have not observed a single plant die of this disease, though Asters did badly during the cold, dry summer of last year.

East Yorkshire.

F. M. S.

MICHAELMAS DAISIES FOR CONSERVATORY DECORATION.

NOW is the time to pot up these charming plants to introduce into the conservatory or greenhouse or the hall in September and October, where they would be highly appreciated as a novelty and for their graceful habit at a time when colour is wanted and families are at home

for the shooting season. As they are protected from winds and rain, the blossoms expand to their full beauty and can be introduced in succession, reserves being kept in a north house or orchard-house.

Single crowns should be selected and potted into 7-inch or 9-inch pots in good loam with a little well-rotted manure and sand. When potted, shade for a few days until the plants have recovered from the shift; then stand them out of doors on an ash bottom to prevent worms entering the pots, or stand the pots in pans. When they are 1 foot high, place a suitable stick to the plants and tie them loosely; and from time to time turn the pots round to get a regular set of side shoots, and see that the watering is attended to regularly.

When the buds form, a little weak liquid manure will be helpful, as by that time the roots have exhausted the soil. By using only single shoots, the plants assume a pyramidal or conical shape and the natural habit is developed, in preference to that crowded, bundled appearance so often seen in the open border, and the graceful pendent shoots of the *ericoides* section are seen to advantage. The following can be recommended for this purpose:

Large-Flowered.—Climax, light blue, 5 feet; Lil Fardell, silvery rose, early, 4 feet; Robert Parker, dark lavender, 4 feet; Nancy, pale blue,



CROCUSES NATURALISED UNDER TREES ON GRASSY MOUNDS.

pygmæa; *E. mediterranea alba*, *E. m. glauca*, *E. m. nana* and *E. m. stricta*; *E. Tetralix alba*, *E. T. a. major*, *E. T. molle*, *E. T. pallida* and *E. T. præcox*; *E. cinerea alba*, *E. c. a. major*, *E. c. atrosanguinea*, *E. c. coccinea*, *E. c. purpurea*, *E. c. rosea* and *E. c. rubra*; *E. Veitchii*, *E. Stuartii*, *E. Lawsonii*, *E. mackayana* and many others. Having disposed of these dwarf-growing and rare varieties on the boundary lines of the rockery in modest quantities, we shall extend our operations on larger and bolder lines, using freely of such bright varieties as *E. vulgaris Alportii*, *E. v. Hammondii* and *E. v. Searlii*; *E. carnea* or *herbacea* and *E. h. alba*; the various varieties of the Cornish Heath, the Dorset Heath and some of the taller varieties, embracing *E. arborea*, *E. multiflora*, *E. codonodes*, *E. stricta* and *E. mediterranea*; and we must not omit large breadths of the midsummer-flowering varieties, *E. australis* and *E. mediterranea multiflora*. The spring-flowering varieties may have their flowering season considerably retarded owing to the high altitude and consequent long presence of snow, so that on the approach of favourable weather we may expect to have one long continuance of bloom.

Glamis.

THOMAS WILSON.

(To be continued.)

try a simple remedy for the insidious black leg which carries off so many of them. In my own garden for a long time it was simply a gamble to make a sowing of Aster seed, for, in spite of every care, they would die like flies from the time they were pricked off to the flowering stage, this latter occurrence being most exasperating. A neighbour lost over three thousand plants one season just before they were bedded out, and I often meditated giving them up, but never did, for the improved varieties of late years are most fascinating, with their long stalks and soft colours, either in the garden or as cut flowers.

Soil fumigation, spraying, keeping very dry, growing with or without manure, in various kinds of soil, were all tried as infallible remedies, until I began to think there were as many remedies for this as for neuralgia, and that they were about as effective. A chance visit to a market garden in the Midlands provided me with the remedy I had been seeking, and the proprietor, who grew Asters in quantity for marketing as cut flowers, vouched for its success after seven years' trial, and I have tried it for the last three years with equally good results.

It is very simple, and merely consists of treating the Aster as a hardy annual and sowing directly into the open ground, practically in the same manner

4 feet; Mrs. Rayner, rich carmine, 4 feet; Daisy Peters, white, 4 feet; Rapture, pale rose, 5 feet; Finchley White, 4 feet.

Medium-Sized Blooms.—St. Egwin, bright pink, 3 feet; Mrs. J. G. Day, rosy pink, 3½ feet; Royalty, rose pink, 2 feet; Saturn, amethyst blue, 5 feet; cordifolius Daydream, white, 4 feet; c. elegans, rosy lavender, 4 feet.

Ericoides (Heath) Section.—Amity, white, pretty habit, 2 feet; Clio, bluish flowers, 3 feet; Harmony, pale blush, 3 feet; Hon. Edith Gibbs, pale blush, 5 feet; Laceus, white, late, 5 feet.

GEORGE BUNYARD, V.M.H.

WALL GARDENS AND WALL PLANTS.

IN Nature we see that the most charming and delicate plants grow between stones; moraines, rocks, pierriers (the stone piles or heaps that fall from the mountains) and walls are the best frames for the finest of the alpine plants. I never saw anything more beautiful than the carpets of *Viola cenisia*, *V. Comolii* or *V. nummulariæfolia* in the pierriers of the Alps, or of *Androsace glacialis*, *Eritrichium nanum* and *Saxifraga aphylla* on the high paths, and the poorer the soil the better the plants flower. In the old walls of this country, along the lakes, and on the borders of the most sunny roads you can see in thousands the noble flowers of the Red Valerian (*Centranthus ruber*), the pendulous flowers of *Corydalis lutea*, *Antirrhinum majus*, *A. Asarina*, *Cerastium*, *Dianthus* and many others. These walls are exposed to the full sun the whole year, and are naturally adorned with flowers. The reason why is because the stone is a retainer of the atmospheric moisture. Like a swamp, the stone retains moisture, and returns it by degrees to the air or to the roots of the plants which grow in it. Yet, on the other hand, in those countries where humidity is a nuisance, the stones are precious, because they drain the soil and absorb the water in their multitudinous canals.

In England particularly the walls are excellent for cultivating the most precious and tender of the alpinæ, especially such as *Androsace* and *Eritrichium*. My first wall garden was built in my formal garden at Plainpalais (Geneva) in 1885. There I had some beautiful plants, and I flowered very well *Campanula Raineri*, *C. excisa*, *C. petræa*, *C. Zoysii*, *Androsace Helvetia*, *Saxifraga media*, *S. aretioides*, *S. Vandellii*, *S. diapiensoides*, *S. valdensis*, *Eritrichium nanum*, *Phyteuma comosum*, *P. humile* and many others. Here at Floraire I made a new wall some ten years ago, and it is now in its beauty. The wall is 84 feet long, 6 feet wide and 5 feet high. It is an isolated construction, filled inside with common soil, and facing south-west and north-east. In the first spring I had flowering in it the best jewels of the mountain plants—*Androsace Laggeri*, *A. vitaliana*, *Arabis alpina*, *A. aubrietoides*, *A. rosea*, *A. caucæa*, *A. purpurascens*, all the *Aubrietias*, *Drabas*,

Iberis saxatilis, *I. stylosa*, *Saxifraga apiculata*, *S. Albertii*, *S. aretioides*, *S. Boydii*, *S. B. alba*, *S. burseriana* and its varieties, *S. Grisebachii*, *S. Kotschyii*, *S. sancta*, *Daphne blagayana*, *Primula Allionii*, *P. marginata* and *P. hirsuta*. All of these were in flower this year at the end of February, and by the time this note appears I shall have in my wall garden many hundreds of different species in flower—*Alyssum*, *Androsaces* of all kinds, *Armeria cæspitosa*, *Brassica repanda*, *Coluteocarpus reticulatus*, the first flowering *Dianthus*, all the *Erysimums*, *Matthiolas* and all rock-loving *Primulas*.

May and June are the best months of all to see this wall. Every kind of rare plant flowers there with the greatest abundance and ease.

Floraire, Geneva.

H. CORREVON.

CROCUSES NATURALISED IN GRASS.

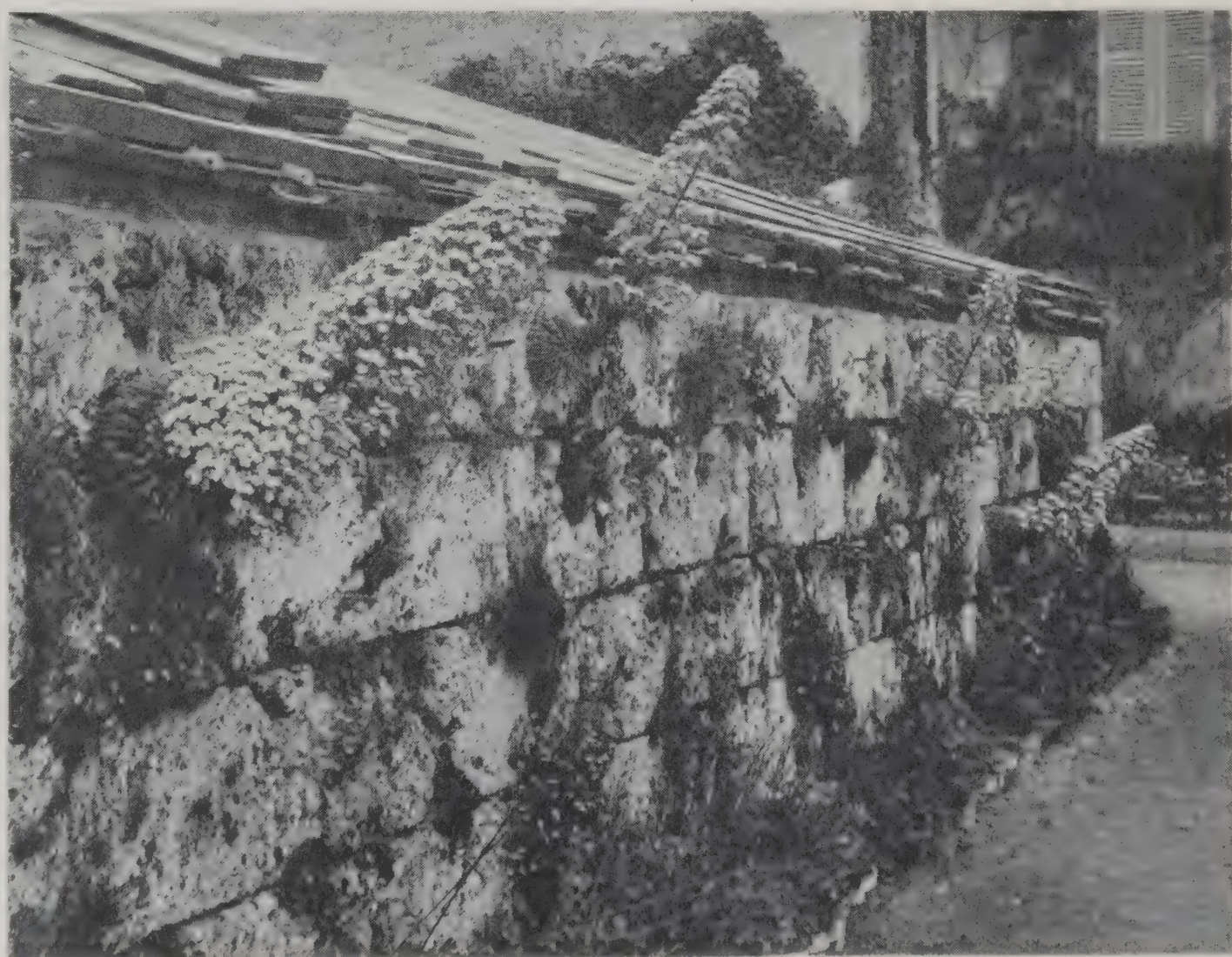
CONSIDERING the ease with which Crocuses, either yellow, white, lilac or purple, may be naturalised in grass, it is no small wonder that

ORCHID NOTES.

THE LYCASTES.

THIS is a distinct genus not often confused with others, and it embraces about twenty-five species, which for the most part are very beautiful. The majority are natives of Central America, of easy culture, free flowering—in some instances as many as fifteen flowers being produced from one pseudo-bulb—and they remain in full beauty for several weeks, while some possess a pleasing fragrance.

The most popular is unquestionably *Lycaste Skinneri*, which was discovered by Mr. G. Ure Skinner in Guatemala, who brought it to England in 1841, and it flowered for the first time in this country in the following year at Broughton Hall, Manchester, where the Rev. John Clowes had a fine collection. It is still imported from Guatemala and the surrounding districts, and every amateur should procure a few plants of this beautiful winter-flowering Orchid. The blossoms are large and handsome; the sepals and petals are white, flushed with rose; and the lip is almost white, thickly



ALPINE FLOWERS ON MR. H. CORREVON'S WALL GARDEN AT FLORAIRE, GENEVA.

they are now so frequently grown in this effective way. They are seen to best advantage when grown in irregular groups on tree-covered banks or mounds. The grass and *Crocus* foliage ought not to be mown off until mid-May, and after then the grass may be kept mown regularly. Surely there is no sight more beautiful than Crocuses in full flower scattered among the grass on a sunny spring morning. Yellow varieties should be planted alone; the white and lilac varieties mingle well together, as may be seen by the illustration on the opposite page.

spotted with rose and crimson. There are several named varieties, such as *alba*, *picta*, *armeniaca*, &c., which differ from the type in colour. Another fine species is *L. aromatica*, which is golden yellow and fragrant. *L. cruenta* is somewhat similar. Other distinct kinds are *L. gigantea*, *L. candida*, *L. Deppei* and *L. macrophylla*; but for an amateur's collection *L. Skinneri* and *L. aromatica* would suffice.

Cultural Details.—Both of these plants can be grown successfully either in the cool house or intermediate division; but if the former is chosen

it will be advisable to see that the atmosphere is not overcharged with moisture, nor the temperature allowed to drop below 50° Fahr. during the winter months. Lycastes are free-rooting subjects, and should in consequence be provided with ample pot room. The pots ought to be filled one-third of their depth with drainage, over which is placed a thin layer of sphagnum moss to maintain a free outlet for water. The compost is made up of good fibrous loam, Osmunda fibre, partly decayed Oak leaves and sphagnum moss in equal parts. When repotting, press the mixture moderately firm, and the surface should be about half an inch below the rim of the pot. This operation is best done when the new growth is about 2 inches or 3 inches in length. During the growing period they must be supplied with ample water; and although Lycastes require a rest after the pseudo-bulbs are fully matured, they should at no time be permitted to get really dry at the root. Light shading is essential through the spring and summer months, but at other times the plants must be placed in a position where they can receive all the light possible. Red spider will be found occasionally on the under sides of the leaves, which causes them to turn yellow and prematurely decay. To prevent this, the foliage should be carefully sponged at intervals with a weak solution of some reliable insecticide; then the leaves will remain green and the plants present a pleasing appearance, even when not in flower.

T. W. BRISCOE.

ANNUAL FLOWERS FOR AMATEURS' GARDENS.

ONE has only to look around during a summer ramble or a cycling tour to note how rigidly the multitude of amateur gardeners cling to the older styles of bedding-out designs, where are the Zonal Pelargoniums, Lobelias, Calceolarias, Iresines and Ageratums, with, here and there, a sprinkling of Cannas, Fuchsias or Palms as dot plants to relieve the flatness of these somewhat stereotyped forms of bedding. Let it not be imagined that one wishes to see this form of bedding-out eliminated from the flower garden entirely. Far from it, because some very beautiful designs in grouping and colouring are frequently met with; but, on the other hand, in the majority of cases much more might be expected when one calculates the time and expense incurred in the propagation and wintering of the various plants concerned in the formation of these designs. It is a positive relief when one comes across an amateur or gardener who is imbued with a genius for giving a trial to a scheme of bedding-out with annuals in place of those plants just mentioned.

Annuals are peculiarly adapted to the requirements of many amateurs, who, by reason of their occupations, cannot give to their gardens so much time as is required for the propagation and preparation of the first-mentioned plants. Again, if the amateur has to depend entirely upon the nurseryman for his supply of those plants for his beds, his expenses are heavy indeed to what they would be if annuals were used in their stead, and this latter is, to my mind, one of the chief features in their favour, apart from their adaptability to be used in groups and masses, to form many pleasing colour effects, and for cutting purposes.

Sowing.—Most of the hardy annuals may be sown in the open ground from the middle of

firm's packets. Should a very dry period follow immediately after sowing, it may become necessary to assist germination with an occasional sprinkling from the water-can. Birds have a liking for the tender seedlings of many annuals, as they have for vegetables, and protection must be afforded until the seedlings have grown sufficiently strong to do without it. Slugs also must be kept in check with an occasional dusting of soot or lime.

A Selection of Hardy Annuals for sowing during the early months of the year may be helpful: *Acroclium*, *Alyssum*, *Bartonia*, *Calandrinia*, *Calendula*, *Candytufts*, *Chrysanthemums* (coronarium and inodorum varieties), *Clarkias*, *Coreopsis*, *Cornflowers*, *Eschscholtzia*, *Godetia*, *Gypsophila*, *Helianthus*, *Larkspurs*, *Lavatera*, *Lupinus*, *Limnanthes*, *Linaria*, *Matthiola*, *Mignonette*, *Nemophila*, *Nigella*, *Poppy*, *Silene*, *Sunflowers*, *Sweet Sultan*, *Tropaeolum*, *Virginian Stock*, *Whitlavia* and *Xeranthemum*. Many of the above-named are suitable for autumn sowing also.

Half-Hardy Annuals.

Hitherto only the hardy annuals have been dealt with, but one must not lose sight of the very pretty and equally serviceable half-hardy varieties. These latter need rather more care than their hardy neighbours, but the extra care bestowed fully compensates their owner. A warm greenhouse is perhaps the best place in which to sow the seeds, the latter being sown in boxes, pots or pans containing a light, sandy compost, well drained. Care should be exercised not to sow too thickly or too deeply, nor in a soil too wet and pasty, or the seedlings may damp off wholesale soon after they get above the soil. The seedlings should be spaced out into other receptacles by means of a dibber to cause them to grow sturdy; and by the time May comes along they will, by judicious hardening off, be strong specimens ready for planting out. Failing a greenhouse, a frame placed on a hot-bed makes a very serviceable structure in which to sow and rear seedling half-hardy annuals during the early stages of their growth. They may be gradually inured to cold-frame conditions as they gain size and strength. A selection of half-hardy annuals may be made from the following: *Asters*, *Arctotis*, *Balsams*, *Cockscombs*, *Gaillardias*, *Lobelias*, *Marigolds*, *Nemesias*, *Phlox Drummondii*, *Portulaca*, *Ricinus*, *Salpiglossis*, *Stocks*, *Tobacco Plants* and *Zinnias*.

A last word may be appended *re* *Mignonette*. To grow good specimens the ground should be made very firm in which the seeds are sown. In some districts *Mignonette* is very unreliable when sown in the open. To avert disappointment it is wise to sow three or five seeds in a 2½-inch pot of light compost and plant the seedlings outside when established.

J. C. WADD.
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NARCISSUS W. P. MILNER, A PALE SULPHUR VARIETY OF MODEST SIZE, SUITABLE FOR ROCKWORK. (See page 151.)

March until the middle of May, and many of them are suitable for sowing again during August and September to provide an early display of bloom the following year. If it is decided to sow them where they are to flower, the soil must have been well dug and weathered beforehand, so that when raked down a fine tilth will be the result. The smaller kinds of seeds should be sown broadcast thinly over the prepared surface (having first inserted the label of the variety being sown), and then covered with a little finely sifted soil from a box or barrow. Larger seeds may be dibbled into position at a depth and distance suitable to their requirements, stated plainly on most

GARDENING FOR BEGINNERS.

SPRING WORK IN THE GREENHOUSE.

AT no season is work more pressing in the greenhouse than the early part of spring. Thousands of plants must be raised now, either from seeds or cuttings, and on this work depends, chiefly, the success of plant cultivation during the greater part of the year. Even those who have had considerable experience are obliged to very carefully consider this matter, and those who are inexperienced welcome hints that will be helpful to them. All

Old, Leggy Plants are not useless if they are properly treated. There are many specimens of this description in greenhouses. It is necessary to cut off the tops of some and discard them, relying upon the old stems to produce young shoots. There are others that may be topped and the tops rooted, as well as side shoots that are produced from the decapitated stems. The possessor of a warm propagating-frame may quickly strike the removed tops. Others, who cannot command a warm propagating-frame, may treat the long-stemmed plants as shown in Fig. 1. Greenhouse *Dracenas*, *Ficus elastica* and similar kinds of plants may be treated in this way. About six inches beneath the lowest leaves the stem should be cut, as shown at No. 1, denoted by the arrow. Keep open the lip by inserting a stone or a piece of charcoal. Then procure a pot, No. 2, deep and narrow, and split it to form two halves, fix it to the stem, bind it with wire, and support it firmly in position to two stakes driven into the soil in the large flower-pot. Then



REDUCING A LONG-STEMMED DRACENA BY "RINGING" THE STEM.

fill the stem pot with leaf-soil, sand and loam in equal quantities, and keep it in a uniform state of moisture. Before midsummer stem roots will have taken possession of the soil in the pot, and then the main stem, just below the pot, must be gradually severed. Keep the severed top in a shady place and continue to water with the same care. Now, a number of young side shoots will grow from the old, bare stem if it is syringed daily. These new shoots will be available for removal next spring and form nice cuttings for propagation. The old stem, after their removal, must be cut down to 6 inches above the soil in the pot. From this old stump a strong young shoot will grow, and in due course form a nice plant on the original one and in the original pot. Repotting may then take place, the old stem, No. 3, being replaced by a vigorous, low-grown head. *Cannas* are

Noble Greenhouse Plants. Seeds sown in pots filled with a sandy mixture and plunged in a mild hot-bed soon germinate. They take a much longer time if not subjected to bottom-heat. They are very beautiful, the foliage, as well as the *Gladiolus*-like flowers, having a noble appearance in a greenhouse. The temperature of the latter is just suitable to a steady, luxuriant growth. No. 1, Fig. 2, shows a strong seedling plant ready for potting separately. No. 2 depicts the proper depth to plant.

Old Roots or Tubers may now be started into growth by placing them in boxes and just covering the tuber portion with leaf-soil, loam and sand. When well rooted and the new growth is proportionately advanced, pot each old root separately, as shown at No. 3. A position on a side stage fully exposed to the sun's rays will do nicely, as full light is conducive to that rich colouring of the leaves. Feeding is neither necessary nor desirable until the plants have filled their flowering pots with roots; then stimulants, wisely given, will strengthen the flower-stems and individual blossoms.

Standard Heliotropes and Fuchsias.—These should be more generally grown in greenhouses than at the present time, because they give a unique appearance to such structures. Their presence, either on the floor or on the stage, takes away the formal appearance of the dwarf pot plants. Standards of substance are not grown in one season—they require treatment over at least two years—but a beginning must be made, and so why not start now? Select a few long-stemmed young plants propagated last year, repot them forthwith and stake them. Do not pot very firmly and use a rich compost. In a few months' time these plants will be 20 inches high or so, and possess thick stems. Then repot again, but press the soil more firmly, and so induce additional growth with riper wood. When of the desired height, top the plants, and allow side shoots to grow and form the basis of the head.

Begonias, Gloxinias, Gesneras and similar kinds of plants now making leaves freely need not be grown under such heavy shadings as one sometimes notices. One of the best collections of tuberous *Begonias* the writer ever saw was grown in a cool greenhouse without any shading



STURDY CANNA SEEDLINGS READY TO POT ON AND AN OLD ROOT STARTING INTO GROWTH.

The aspect was south-west. Careful ventilation and watering are the principal points to note. G.G.

THE EFFECT OF MIXED MANURING.

IN mixing manures there are other things to consider than the possible detriment which the process may involve to the several ingredients. The latter is, of course, a matter of much practical importance in some cases, but we should also consider the effect on the plant. The subject is still an obscure one, and experiments are conflicting, but they sometimes show startling results in favour of combined over single manures. Often enough, two manures favourable when used separately will do better in combination, and sometimes the sum of the separate results is exceeded. It is very difficult, of course, to say which is the predominating partner, but some guide is afforded by the relative effect of the added manure. The nitrogen added, for example, may give much more effect than phosphate added each one to the other or to potash, and some very discordant results have been obtained merely by this means. It is not, then, merely a question of using different manures containing the same plant food in different forms, for this we know will give an infinity of varying results; but the relative order of using and changes in the quantity used, and especially season and soil, will often be factors to reckon with. Dealing generally with mixtures, it has been assumed that if nitrogen alone does well for a crop, it will give the same relative results in a mixture, and that possibly other manures will do the same. This is mere conjecture, however, though nitrogen generally gives a better return than other manures when applied alone; but when used with superphosphate, for example, it seems very probable that its relative action is not the same. There are reasons for this, because manures in mixture may not act directly on the plant; they may react on each other, to their mutual or individual benefit, or on the constituents of the soil, or in more complicated ways. GERVASE TURNBULL.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Early Pot Vines.—These will have finished stoning, and will require careful watering and feeding. Examine the pots several times daily and give liberal supplies of manure in a liquid form. A light top-dressing of loam and artificial manure may be applied, and should be made firm on the surface of the soil. Keep up a brisk heat until the Grapes have finished swelling, after which a little more ventilation may be necessary to colour the berries.

Melons.—The early plants, having set their fruit, should now be given a brisk heat, with plenty of atmospheric moisture. The fruits should be supported by some means before they are large enough to injure their stems through their own weight. Give liberal supplies of water at the roots, and stop the lateral growths before the trellis becomes overcrowded. A light dusting of Le Fruitier will be found beneficial to these during the swelling period. Ventilate with great caution, always avoiding cold draughts. The night temperature may be from 70° to 75° in mild weather, rising 10° by day with sun-heat.

Strawberries in Pots.—By this time the early batch of Strawberries will be in an advanced state. During the ripening stage air should be given more freely, and the atmosphere may be kept less moist. Expose the fruits to the sun by means of small forked sticks. Continue to introduce plants into heat as space becomes available.

Plants Under Glass.

Pot Roses.—The latest batch of plants should now be introduced to mild heat. Plants which are showing flower will benefit by frequent waterings of liquid manure from the farmyard, and later plants may receive a surface dressing of loam and artificial manure. Avoid cold draughts, which are almost sure to produce mildew. Plants of

Hydrangea hortensis which have been wintered in cool quarters may now be started into growth in numbers, according to the requirements of the place. Others may be retarded in a cool north house, and will be valuable for decoration during the summer. The early plants may be watered freely with liquid manure and grown in a temperature of 60° until the flowers are fully developed.

Ixoras.—The present is a good time to prune, clean and repot any plants which require it and are intended for flowering later in the season; but the earliest flowers are obtained from plants which were potted late in the season, and only require cleaning and top-dressing now.

Perpetual - Flowering Carnations.—Young plants raised from cuttings early in the year should now be ready for potting into 4-inch pots. It is a mistake to grow young Carnation plants in too much heat, as this will produce weak, spindly growth, which is never capable of producing satisfactory flowers.

The Flower Garden.

Hyacinths and Early Flowering Tulips are now throwing up their flower-spikes, and should receive support at once, as a rough wind may soon spoil the effect by breaking off some of the finest blooms. After the supports have been placed in position, the surface of the soil should be carefully broken up with a small Dutch hoe.

The Rose Garden.—Continue the pruning of dwarf Roses. All spindly shoots should be cut to within a few eyes of the base. At the same time, all wood which may have been injured by frost should be removed. The tying of all climbing Roses should now be finished. In positions where the plants are exposed to the sun, a mulching of cow-manure should be applied before the season is too far advanced.

The Kitchen Garden.

Cauliflower.—Plants which have been wintered in cold frames should be gradually hardened off in readiness for planting out in the early part of April. Remove the lights by day if the weather is favourable, and allow a fair amount of air during the night. Careful attention should be given

to watering, as, once the plants become stunted, the result will not be satisfactory. If the pots are well filled with roots, weak liquid manure may be applied with advantage.

Leeks.—The main batch of Leek seed should be sown as soon as the soil is in good order. Sow in shallow drills a foot apart.

Brussels Sprouts.—There should be no delay in sowing the main crop of Brussels Sprouts. A sheltered border should be chosen for the purpose, for although seeds were sown under glass a month ago, the best results may be expected from plants which have been grown in the open from the beginning. Ideal, Dwarf Gem and Sutton's Exhibition are good varieties.

Cabbage.—Seed should be sown now in the open border for cutting in July and August. This is a much better practice than to depend on a second cutting from plants which were put out in the autumn.

Cauliflower Seed should be sown every three weeks from now until the middle of May, and the plants of each batch grown without a check, so that an unbroken daily supply may be kept up throughout the summer and autumn. Great Dane, Magnum Bonum, Early London and Hallowe'en Giant are extensively grown at Frogmore, the last-named variety for the latest supply.

Lettuce.—Plants raised from spring-sown seed should now be ready for planting in cold pits or on a warm south border. Make a sowing of Lettuce seed every ten days, choosing, as the season advances, cooler situations and suitable varieties. For early supplies out of doors Pioneer and Golden Ball are good Cabbage Lettuces, while Mammoth White Cos is one of the best for early summer supplies.

The Hardy Fruit Garden.

The Protection of Fruit Blossom.—Careful attention should be given to the protection of Peach, Nectarine and Apricot blossom whenever there is the slightest danger of frost.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Potatoes.—In most cases the main crop of Potatoes may now be planted, or at any rate before the end of the month. It may not be out of place here to emphasise the importance of giving sufficient room, not only between the rows, but also between the sets. For strong-growing varieties the distance between the rows should not be less than 30 inches, and that between the sets 15 inches. Assuming that the Potatoes were placed in boxes some time ago, they should now be nicely sprouted. If time permitted, it would pay to go over them and reduce the sprouts on each set to two at most. Small and medium-sized Potatoes should be planted whole, while larger tubers should be divided. By all means avoid planting too close, which often proves very harmful.

Salsify.—In the majority of gardens one sowing of Salsify will suffice, which may be made now. The soil for this crop ought to be fairly deep, and manured the previous season, such as the Celery ground. The object should be to get long, clean roots. I find there is now a greater demand for this vegetable than there has been for some years, and that is not to be wondered at, seeing that it supplies a fine dish when vegetables are scarce.

Celery.—Seed of the main crop of Celery may now be sown, and for all practical purposes this sowing will in most cases meet all the demands of the average household. When the seedlings are large enough, they may be pricked into frames, and if some well-rotted manure has previously been forked in, they will grow very rapidly, and will lift with good balls of soil for planting. When time permits, the trenches may be got ready. One generally finds that the soil will work better now than later.

Broccoli and Winter Greens.—Seed of the autumn varieties of Broccoli may now be sown, as well as that of Savoy and other winter greens.

The Flower Garden.

Summer-Flowering Chrysanthemums.—Old plants may now be divided and replanted, and if cuttings are preferred, it is not too late to put in a batch. These will root in a short time, and will be ready to be put out with the other bedding plants.

Herbaceous Pæonies.—These lovely early summer-flowering Pæonies, so useful for cutting, resent being disturbed at the roots. That being so, it will be necessary to top-dress or fork in some good turf and a little old manure. This will greatly increase the size and quality of the blooms.

Bedding Begonias.—The tubers may now be looked over and planted in frames, and watered slightly from time to time to enable them to start into growth. They must be exposed to all the light and air possible, so that they may be encouraged to make sturdy growth, which will be less likely to be damaged when planted out.

Antirrhinums.—Where the seed was sown at the end of January or the beginning of February, the young plants will be ready for pricking out, and for this purpose I prefer boxes, which can be kept closer to the glass than if planted out in frames. Aim at having nice sturdy little plants for planting out.

Lawns.—The present will be a suitable time to top-dress mossy or bare patches on the lawn with a compost of sifted soil and sand in which some lawn grass seed has been added. These patches will require to be protected against sparrows, otherwise they will make short work of the seed. All trimming of grass edges may now be proceeded with, and sweeping and rolling of the lawns may now be done.

Plants Under Glass.

Eucharis amazonica.—These once indispensable flowering stove plants are not now so largely grown as they used to be, due, no doubt, to the fact that stove plants generally are not in such demand. They are to a certain extent very accommodating, as they can be had in bloom at various seasons of the year, according to the treatment. Unfortunately, the mite that attacks the bulb is very difficult to get rid of, and is responsible for the destruction of many fine collections. When this is present, one has to take drastic measures to eradicate it. There is nothing for it but to shake the bulbs out of the pots and wash them thoroughly with an approved insecticide. Plants that have been partially rested may now be introduced into a little more heat. Those that require potting should afterwards be plunged in a hot-bed and watered very sparingly at first; indeed, frequent syringing will be all that is required for a time.

Bouvardias.—Plants that were placed in heat some time ago will now be commencing growth, and a start may be made in getting the cuttings put in. They had better be placed in the propagating-case and slightly shaded, as sometimes they are troublesome to root. When the young plants are well rooted, the leading shoot must be pinched to ensure a sturdy habit.

Calanthes.—These will now be showing their growth, and may be taken out of the pots and thoroughly washed to dislodge any scale that may be on the bulb. They should be potted in a mixture of good turfy loam, dried cow-manure and charcoal, and placed on a stage in a warm house and syringed several times a day.

The Hardy Fruit Garden.

Cherries.—The early varieties will now be in flower, and should be protected with a double herring-net. This will be found to be a grand protection against heavy storms of sleet and rain, which do such havoc just as the flowers are setting.

Vines.—Now that the sun has increased power and with the prevailing cold, cutting winds of this season, great care will be necessary to prevent the tender foliage becoming scorched. The slightest carelessness in airing will do great damage to the foliage, and, consequently, will check the swelling of the berries. The man in charge should see that there is a nice warmth in the pipes in the early morning before admitting air, and this must be done very cautiously.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

DAFFODIL NOTES.

Correction.—I am very sorry to find that I persistently used the name *Distinction* for one of the new "Vis" Poetaz that I wrote about in my last notes. I should have said *Admiration*. I hope this bit of stupidity on my part will not cause anyone any inconvenience, and that they will end by getting hold of the right thing should they wish to try it, which I again take the opportunity of urging upon those who like something new and good. There were a few excellent examples of this striking novelty on Messrs. Barr and Sons' stand at the Royal Horticultural Society's Bulb Show on the 10th inst.

The New Poetaz.—The plants that I mentioned in *THE GARDEN* of March 7 have now bloomed. Three are down in my private notes as *Ar*. I think, too, that I may generalise now about another feature of this new type. On the whole, the cups are not only larger, but they are also undoubtedly, in many cases, flatter. Irrespective of all else, why is it that these "flat cups" or eyes are so strangely effective? They always seem to be the just-what-is-wanted to set off a flower. My special favourite, *Orange Blossom*, has this telling gift of the gods, and I account it one of its greatest charms. Among those sent me for trial by Messrs. M. van Waveren and Sons, I find this characteristic fully developed in *Haemon*, which is an all-yellow. As usual, the centre is of a deeper shade than the perianth, which in this case is somewhat undulating. As I have already hinted, the centre is flat and large, as these actual dimensions prove: Diameter of the flower, $2\frac{1}{4}$ inches; of the eye, seven-eighths of an inch. The stem is tall and strong, and each one bears on an average five well-placed blooms. My *Ar* trio is completed by *Lucrece*, which is similar to my favourite *Orange Blossom*, and *Antigone*, a white and yellow, with the eye large and flat. The plant itself is on the dwarf side.

Following the above come in order of merit *Mignon*, a pretty flower with a small, bright orange red cup and white perianth; *Sovereign*, an improved *Irene*; *Yoconde*, a sort of smooth, round-stemmed *Sunset*; *Bouquet Enovme*, with a look of the old *Ideal*; and *Eurydice*, a large cupped and dwarf *Triumph*. Mr. H. Prins of Lisse exhibited under numbers a collection of about a dozen at the bulb show, but there was none that excelled the trio above mentioned. It is, however, only fair to say that with better staging or arrangement they might have appeared to greater advantage.

The Show Generally.—I believe the official mind of the Royal Horticultural Society will not allow that the exhibition on March 10 and 11 is, or was, a forced bulb show; but as such the public regard it and speak of it. I only hope the Council will see the wisdom of coming into line and encouraging more than they do now exhibits more in consonance with its popular appellation. We want early Tulips in pots and Daffodils in pots to fill up what certainly is a bit of a gap. The inclusion of these would do so much to remedy the defect. Two groups of Daffodils received silver-gilt Banksian medals, viz., those of Messrs. Barr and Sons and Messrs. Cartwright and Goodwin. Both displays were excellent. I was glad to note the collection in bowls (grown in fibre) of Messrs. James Carter and Co. This received a silver *Flora* medal, but when the merits of the cinerary garden were added, the Council said, "Friends, go up higher,"

and the *Narcissus* committee's medal became a silver-gilt *Flora*. That old urn (in shape like a pierrot's hat made in clay, the top cut off and then turned upside down) on its pedestal in the midst of a lovely smooth, green lawn, edged on one side with pretty pink Tulips and other nice flowers, and on the opposite one by an open panelled wall surmounted with bright bits of colour and the dark green of evergreen trees, was, so it seemed to my fancy, both allegorical and prophetic, as well as being the centre of a well-conceived harmony.

The New Awards.—The new system of granting awards to Daffodils according to their suitability for certain purposes came into operation for the first time. An award of merit for its suitability for growing in pots was given to *Olympia*. Two excellent examples were placed before the committee, with the result that the high opinion I have always had of this fine variety has now had the imprimatur of the committee. As a plant for pots *Olympia* comes easily, is very free, and has blooms of a remarkable size. It will be of interest, perhaps, to some to know that this variety does well in California, where a brother of Mr. F. Herbert Chapman is living. This gentleman is very keen on Daffodils. At a show at San Francisco on March 27 to March 29, 1913, he exhibited an *Olympia* of his own growing which measured " $5\frac{1}{2}$ inches across."

The other plant that received an award was *W. P. Milner*. This was for its suitability for rockwork. Everyone was in accord in singing its praises for this purpose—dwarf, free-flowering, of good constitution, and of a dainty, striking shade of sulphur yellow, only about a shilling or fifteen-pence a dozen. No one can possibly go wrong in giving it a trial in one or two pockets in their rockery. I wonder why it was not entered for a "pot" award. For 4-inch and 5-inch pots it is quite without a rival and comes almost a pure white. While dealing with these new awards, may I say that when they are given to varieties that have been in commerce for a considerable number of years, the public may be sure that such have been well tested, and that all their merits and demerits must be intimately known; hence the greatest confidence may be placed in them, only buyers must be careful to find out the reason for which they are given, if it is not absolutely clear in the catalogue where they are listed. They should appear like this:

Olympia—Award of merit (pots), March 10, 1914.

W. P. Milner—Award of merit (rockwork), March 10, 1914.

Notable Varieties.—A detailed list must be left until next week. All I can do is to record the first official presentation of *Queen of the West* to the buying public by its owner, Mr. Walter Ware. The raiser (Mr. H. Polman Mooy of Haarlem) came all the way from Holland to see it make its debut.

JOSEPH JACOB.

IS THE DAFFODIL A FLORIST'S FLOWER?

"A WORKING-MAN Florist for Fifty Years" (I wish gentlemen who write over a *nom de plume* would use shorter ones) in your issue of the 14th ult. says the criterion of a good Daffodil in 1820 was: "Strong, erect stems, regularity of form and disposition of the petals and nectors, distinctness and clearness of colours." And he asks if the above ideal is not good enough for anyone? It is certainly good enough for me, and for, I

think, most, if not all, of those who may be said to constitute the present Daffodil world. "A Working-man Florist" then goes on to ask, with great satisfaction, apparently, as if being sure that the answer will unanimously be in his favour, "How many of the recently boomed new varieties are anything near the standard laid down by men who had no axes to grind?" I unhesitatingly say that all the varieties that have received the almost unanimous approval of the Daffodil world during the last, let us say, five years are not only near, but comply with, every one of the points contained in the 1820 ideal. Unless a variety has these points, the raiser or introducer has not a very valuable property, and I cannot call to mind any new varieties that have been boomed by the present Daffodil world that have not all the 1820 ideal points in a pronounced degree. Without referring to catalogues or books, I will mention a few varieties that I suppose would come within the description of "recently boomed varieties," and ask any unbiased lover of flowers whether they do not all possess the points required in 1820. The varieties that occur to me and varieties which I know to be good growers are *Miss Willmott*, *Challenger*, *Empire*, *White Star*, *Bernardino*, *Heroine* and Mrs. E. H. Krelage. If "A Working-man Florist" would take any good Daffodil catalogue and ascertain the correct characteristic of the flowers he designates as "the boomed new varieties," I think he will find that they all comply with the 1820 ideal. I can fancy that many of the present raisers of Daffodils will say, "Why write all this?" Well, my reason is that I think the general statements, which are clearly incorrect, should not be allowed to pass without comment, as nothing is so easy as to make general statements, and nothing more difficult to controvert than such statements if they are allowed to sink in and become members of that very large family sometimes called "vulgar errors." If there is one thing which is more pleasing than another in the Daffodil hobby, it is the strong and healthy views which its followers have as to the qualities that are required for a flower to receive anything more than a passing notice, and there is a tendency every year for a more and more strict observance that a new variety, to be of any real value, should combine the following points: "Strong, erect stem, regularity of form and disposition of the petals and nectors, distinctness and clearness of colours."

C. LEMESLE ADAMS.

CANKER IN FRUIT TREES.

I WAS greatly interested in "Scientist's" reply to a correspondent on page 56 of *THE GARDEN* for January 31, but cannot agree with the impression that he wishes to convey to your correspondent—that this disease can only be brought about by the fungus entering through bruised or cracked bark. So far I can agree with him that the fungus can be carried by wind, and if such wounds are there to receive it, it will spread. But how can "Scientist" account for this attack? During the autumn of 1909 I formed a new kitchen garden here. The soil in one part is a rather heavy clay, the other a light sandy loam. This ground had not been broken up during the memory of the oldest inhabitant; therefore the top spit was composed of a rich deep fibre, ideal for fruit cultivation. In early spring I planted a few dozen Apple trees

On the light loam I put a row of five trees, and among the varieties were Lord Suffield, Lord Grosvenor and Wellington. In the following autumn they showed signs of canker, and the year following I took them out and destroyed them, as every branch was affected. The ground was retrenched, limed, and five trees of Apple James Grieve planted in their place. They showed the same tendency by the autumn as the others had done, and this year they were so bad that I had to destroy them rather than risk infecting the others. Now, both these lots of trees came from first-class fruit-growers, and none had any bruised or broken bark on them to my knowledge, and were clean, healthy plants in every way. As for late frosts splitting the bark, we are not subjected to them in any degree in this part. Further, the old garden is not within 300 yards of the new; therefore I cannot see how the spores could have been carried from it on to these certain trees. Moreover, among the few hundred trees now in the garden are varieties quite as subject to canker as those mentioned, and I have only found one other affected tree of the variety Norfolk Beauty growing on the same kind of soil. In the old garden, which is now given up to the cultivation of shrubs and flowers and a few old fruit trees, even that sterling variety Bramley's Seedling is badly affected with it, and to plant young trees was useless, as after two years they were so bad that they had to be destroyed. A gardener friend not far from here told me that the same thing happened with all young trees he planted. I am convinced that soil, situation and choosing the right varieties for the district that one lives in play a more important part in combating this noxious disease than we imagine.

Logan Gardens, Wigtownshire. R. FINDLAY.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

TREATMENT OF ORNITHOGALUM LACTEUM (J. W. M., South Devon).—While *Ornithogalum lacteum* can only be regarded as a greenhouse plant in most parts of the country, it is quite likely that in your favoured climate it will succeed out of doors. Your suggestion to plant the bulbs at the foot of a very warm wall, using plenty of sand at the base, is a good one and should ensure success. In planting the bulbs they should be placed at such a depth that there is 6 inches of soil above the topmost portion of the bulb. Should sharp frosts occur after the bulbs are planted, a little protection should be afforded them.

WATER LILIES AND GOLD-FISH (Garden).—You cannot do better than place gold-fish in your pond if you wish to have fish at all. They are not likely to stir up mud any worse than other kinds of fish. The following Water Lilies would make a good selection: *Nymphaea alba* and its variety *candidissima*, white; *N. fulva*, red; *N. William Falconer*, red; *N. William Douce*, red; *N. tuberosa flavescens*, yellow; *N. odorata sulphurea*, yellow; *N. Marliacea carnea*, flesh-coloured; *N. M.*

flammea, red; *N. gladstoneana*, white; and *N. robinsoniana*, red. If you plant a clump or two of the Narrow-leaved Reed Mace, *Typha angustifolia*, about the margin, it will relieve the flatness and furnish the cover you desire better than Watercress. A few clumps of *Caltha palustris* and common Ferns planted about the brink will be an advantage.

PLANTS FOR PONDS (Co. K.).—You cannot do better than plant *Nymphaea William Falconer* (red) in one pond and *N. gladstoneana* (white) in the other one. Two good upright-growing plants for the margins are *Butomus umbellatus* and *Typha angustifolia*, with *Acorus Calamus variegatus* if you wish for a little colour. Dwarf plants for the water are *Menyanthes trifoliata* and *Aponogeton distachyon*. It is better to make mounds of soil on which to plant the water plants, rather than spread a layer of soil over the bottom of each tank. Such mounds may be built with good strong turves and be kept in position with the aid of bricks. Or, if you so wish, each plant may be placed in a basket of soil in the pond. To darken the margins of your cemented ponds, mix a little soot with cement until the right shade is obtained, and wash the cement work over as with any other colour wash. Try root-pruning your plant of *Chimonanthus* in July. That may make it flower. Simply chop round the plant with a spade about two feet from the stem. Also leave the branches unpruned this year. If you water your pot plants with soot-water, many of the worms will come to the surface and may then be removed. Mustard-water is even more efficacious. It ought not, however, to be used for delicate plants.

MAKING A MORaine (T. H. G.).—The chief essentials of the moraine are moisture in conjunction with the poorest of soils—sand, grit, rock—as opposed to the richer vegetable soils. You ask for the proportions of different rock to suit certain plants and situations. It is well known, however, that whatever the likes or dislikes of certain alpine plants appear to be when under cultivation in the ordinary way, they disappear as if by magic when planted in the moraine, those from granite rock and others from limestone doing equally well side by side. The moraine should be situated in full sunshine, and the necessary moisture being forthcoming, should render it a success. In the first place, a water-tight bottom should be arranged; following this, beds or compartments at varying depths, the overflow from the upper supplying the lower, and all having an inclination to a prearranged outlet. Above the concrete floor place a 6-inch-thick layer of rather coarse gravel, then a layer of moss or like material to prevent the finer sand particles being silted through, and above this a few inches of grit, pulverised rock and granite chips, with finely sifted peat and leaf-soil in proportion to one-sixth for the majority, adding a little loam for *Gentian*, *Primula* or *Ranunculus*. With your bank-like arrangements of rockery, the moraine should be placed at its base, the water supply being from below and under control. In your case a series of small moraines may take the place of one with divided compartments. The genera most suited include *Androsace*, *Campanula*, *Dianthus*, *Primula*, *Silene*, *Wahlenbergia*, *Soldanella*, *Eritrichium*, *Ramondia* and *Ranunculus*, though many plants will be found to do quite well that hitherto have not succeeded in the ordinary rock garden. You should obtain "The Small Rock Garden," by E. H. Jenkins, published at these offices for 2s. 10d., post free. It contains a valuable chapter on the moraine, with a good list of suitable plants.

DELPHINIUMS (E. H. S. E., Troy).—These plants are generally considered good for flowering to the third year, assuming that a start was made with youthful examples of two or three crowns each. At the end of that period they would be best divided in spring; here, in the Old Country, it is done in March or early April when the new growth is a few inches long. To successfully divide the plants they should first be washed free of all soil, and then, laying the plant on its side on the potting-bench, insert the point of a strong knife into the woody portion of the rootstock, and half cut, half wrench the plants asunder. In replanting, bury the crowns about two inches deep. It is a mistake to plant big clumps of these and many other herbaceous plants intact; the youthful examples are capable of much better work. If you could so arrange matters as to divide and replant a portion of your stock each year, you would obtain a succession of bloom, the young plants usually flowering in August. A similar result would ensue by cutting down a portion of the plants the second or third week in May; or, in the case of big clumps, thinning would be a good substitute. Were you to arrange the plants informally in groups of three, the thinning out to near the ground-level of some of the stronger stems would scarcely be missed, and a secondary or successional flowering would appear practically on the same ground minus the gaps inseparable from cutting down whole plants here and there. You would, of course, have to be prepared for an inferior second flowering, whether from youthful examples or cut-down plants, since, by removing the earlier-formed shoots, only secondary buds remain, not all of which, though they may become active, would be strong enough to flower. In this second flowering, too, there is a greatly diminished stature, the plants losing much of their fine presence. We have thought it well to give you the *pros* and *cons* in the case, so that before acting you will know what to expect.

SOWING SWEET PEAS (Nemo).—The best results are obtained by sowing in the autumn, say, from the middle of September to the middle of October, wintering them in a cold frame or house, and potting on into their flowering pots about the first week in February. (1) If very dwarf, stocky plants are desired, the Cupids are certainly the best, but they are hardly what we should recommend, as the blooms are naturally small and short in the stem and not so useful as the ordinary varieties—

either Spencers or *grandifloras*. If your house is not very high, you might try King Edward VII., Dorothy Eckford, A. J. Cook, Cerise Spencer, Carmine Spencer and Scarlet Monarch; these are a few of the dwarfest of present-day varieties. (2) The soil employed should not be extra rich, and should consist of three parts good turfy loam, one part well-rotted manure and one part coarse sand or grit, to which may be added a 4½-inch potful of bone-meal and the same of soot to each barrow-load. Using pots from 9 inches to 12 inches in diameter, three to four plants in each pot should make really good clumps for staking with four Bamboos tied at the top to a wire circle from 1 foot to 15 inches in diameter; this keeps the stakes steady, and, if the plants are allowed to grow naturally, all that is necessary is to run a string of raffia right round the stakes as the plants make growth. (3) After the plants are potted, which, by the way, should be done very firmly, very little water will be required for a time, though, as the plants make growth, they must not be allowed to suffer. The temperature of the house must be kept fairly low at all times, giving plenty of ventilation during bright, sunny weather, and only sufficient fire-heat at night to put the temperature at from 40° to 45°. Too high a temperature or too much or too little water at the root when the flower-buds are forming is apt to make the buds drop, so that at this period extra attention is necessary; but as soon as the blooms commence to open nicely they will begin to take water and manure *ad lib.* Cow-manure and soot every alternate day, with a dressing of a good compound fertiliser once a week, should keep them growing well, and the syringe may be freely used to keep down fly and to keep the atmosphere of the house just moist during bright weather.

TREES AND SHRUBS.

PRUNING SHRUBS (O. N.).—Plants of *Euonymus* and *Cotoneaster* may be pruned at once if they require it. Gorse, Broom and *Choisya ternata* must be left until after the flowers have fallen. You cannot do much good by laying a Gorse hedge as you would a Thorn hedge, and it would be much better to cut it down to the desired height. Plants of Broom must not be cut below the base of the previous year's growth. Neither *Cotoneaster* nor *Choisya ternata* requires regular pruning.

CLIMBERS OVER TREES (V. C.).—*Clematis montana* and its varieties may be procured from any of the leading nursery firms. They ought to thrive on the trees you mention, providing you take care that they have a bed of good soil, free from tree roots, in which to grow. *Wistaria chinensis* and *W. multi-juga* are both likely to grow successfully in the positions you describe, and good Roses for your purpose are *Rosa moschata*, Dorothy Perkins, Hiawatha, Alberic Barbier, Edmond Proust and Gardenia. Other climbers suitable for the purpose are *Akebia quinata*, *Celastrus articulatus* and *Aristolochia Sipho*.

THE GREENHOUSE.

INSECTS ON ROOTS OF FERNS (A. J.).—It is possible that you might destroy the insects of which you complain if you watered the plants now and then with soot-water. We do not remember having observed such insects in soil before, and are at a loss to account for their presence. If the soot-water does not kill them, wash the soil away from the roots of any plants that cannot be hurt by so doing, and repot the plants in fresh soil.

AFTER-TREATMENT OF FORCED BULBS (H. H. G.).—Bulbs that have been forced can be turned out of their pots and planted thickly in the open ground, provided they are protected from frosts. As the foliage produced under glass is very tender, it will, of course, suffer unless protection be given. In time the leaves will die away and the bulbs go completely to rest. Then, in July, they may be lifted, cleaned and stored in any dry shed or similar spot. In September they may be planted out, using them for filling spaces in borders or like positions, as, of course, their flowers will be comparatively poor, but they will provide a bright patch of colour in the season. The bulbs may, after they have been lifted, dried and cleaned, be stored in bags or boxes until they are required for planting. They must not be kept in too hot a place.

TREATMENT OF ASPIDISTRA (Gorton).—The reason of the unsatisfactory condition of your *Aspidistra* is that it is practically starved and needs repotting. This operation is best carried out in the month of April. A suitable soil may be made up of loam, leaf-mould and sand. In a general way it will be more satisfactory to apply to a local florist, stating the purpose for which the soil is required. It will cost only a few pence. Judging by your sketch, the rhizomes or creeping stems from which the leaves are produced are quite above the soil, and the plant is thereby starved. Apparently, your plant would be better divided into two, which would appear to be an easy matter. The rhizomes, or underground stems, naturally creep towards the edge of the pot, this feature being more apparent in some individuals than in others. In selecting the pots for the divided plants, care should be taken that they are not too large, and are at the same time quite clean and effectually drained by means of some broken crocks. When potting, the crown or growing point must be placed in the centre of the pot, and the rhizome at such a depth that it is covered with about half an inch of soil. This should be pressed down moderately firm and made even. When all is neatly finished, the plants should be watered through a fine rose in order to settle everything in its place. After this, watering must be carefully done, as, if the soil is kept too wet, the roots would be injured. Although the *Aspidistra* needs plenty of light, it should not be exposed to direct sunshine.

THE GARDEN.

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MARCH 28, 1914.

NOTES OF THE WEEK.

Trees Damaged by Gale.—Considerable damage has been done to trees in various parts of the country by the strong gale which last week swept over the British Isles. At Kew a large Lombardy poplar, one of a pair standing either side of one of the principal walks, had its upper part blown down. More serious, however, was the damage done to a remarkably fine specimen of the Tulip Tree standing near to the Rhododendron walk, which was completely wrecked. This specimen tree was well known to visitors and students and will long be remembered.

A Gentian Blue Flower.—*Chionodoxa sardensis* is one of the few flowers which may without the least exaggeration be termed "a gentian blue." It is brighter and more pleasing than the well-known *Scilla sibirica*, and it comes into bloom a week or two earlier. From observations made during the windy and rainy weather which we had in the first half of March this year, it seems better able to stand rough usage than its stable companion, *Lucilia*, which is illustrated here. Both of these varieties, as well as the larger and more mauve-coloured *gigantea*, are very much stronger in growth when they are left undisturbed for several years. Newly planted bulbs bought in the usual way from dealers are never at their best the first time they flower.

Sowing Seeds in Wet Soil.—The excessive cold rain that has been experienced in most parts of the country during the present month has made the soil very cold. It is, therefore, necessary to point out the folly of sowing seeds until the water has drained away and the soil become warmer. If put into cold, wet soil at this season, a great many seeds will decay instead of germinating, and the seedlings, in nine cases out of ten, be wrongly named. Even when the weather has improved it is a good plan in heavy soils to prepare some old potting soil or other light material to put in drills before sowing such fleshy seeds as Peas,

up for early cutting in, say, the first and second week of March. Not a single catalogue that we have seen mentions their adaptability for this purpose. When these Grape Hyacinths are grown under glass, we get quite a long stem—10½ inches is by no means an unusual length—and as they are very strong and wiry, the mixture of blue and white, or the blue alone, make charm-

or conservatory may be glad to know how useful both *Etna* and *Cavaignac* are in this respect. Grown under the same conditions as other varieties, they come into flower quite at the tail end of the family, when most are past their best. *Etna* is a broad-petalled, bright rose, edged deep blush. It forms a compact, not overcrowded spike, and, from what we can learn, it is a most

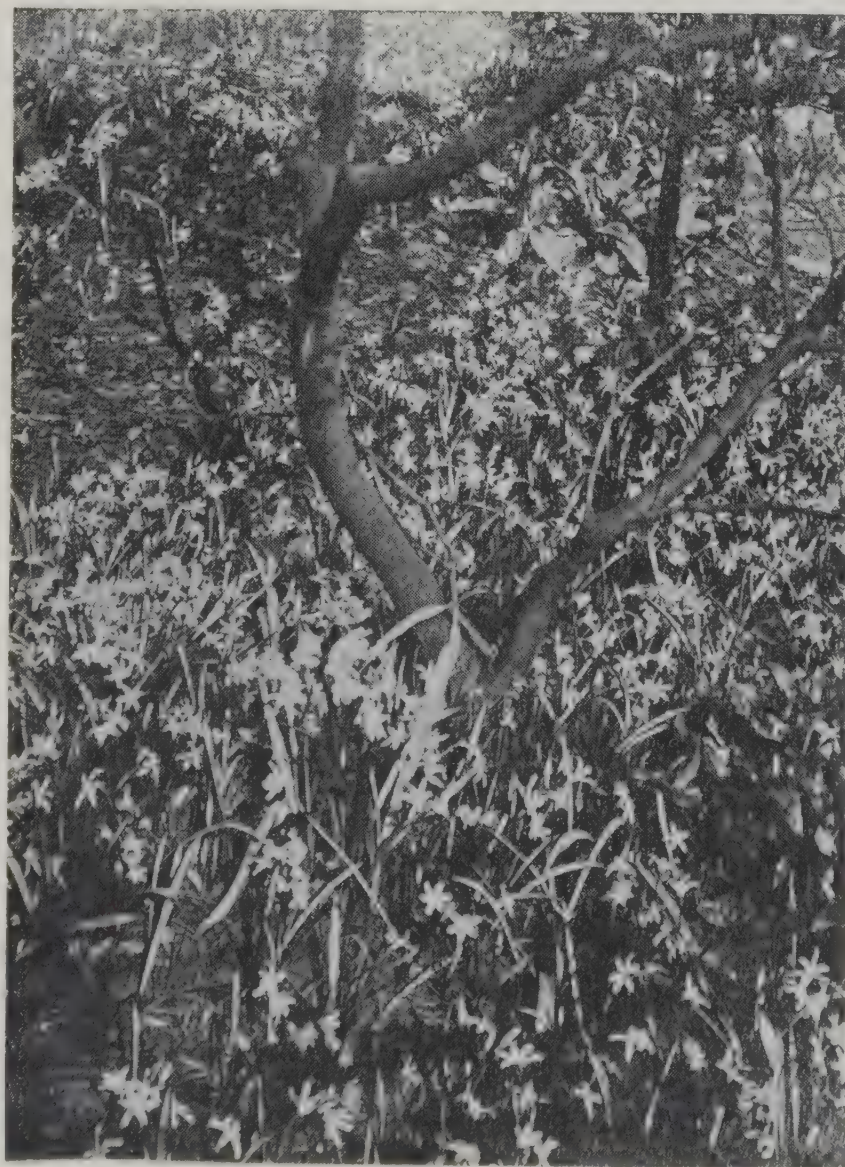
reliable "doer." *Cavaignac*, which is an older variety, has much the same habit of growth, and is equally good for growing in pots. It may be described as a bright salmon rose, a shade of colour which is none too common in Hyacinths.

Acknowledgment of Seed or Plant Orders.

—Our attention has been drawn to the fact that several seed and nursery firms do not acknowledge the receipt of orders or remittances sent to them through the post. We must confess that this comes as a great surprise. It often happens, of course, that goods ordered cannot be despatched for a week or two, or even longer, and the customer is naturally anxious to know that the cheque or postal order has been received. We know it is the custom of most firms to send a formal acknowledgment card of orders and remittances received each day, providing the seeds or plants cannot be despatched at once, the full receipt being sent when the transaction is complete. Neglect of these elementary principles of business is bound to recoil, sooner or later, on those firms which are responsible.

Deterioration of Carnations.

—In the *Carnation Year Book* just published by the Perpetual Flowering Carnation Society there is an interesting contribution on the deterioration of Carnations by Mr. Montagu C. Allwood, who writes: "The great epoch-making Carnation of all past times, Mrs. T. W. Lawson, which bloomed for the first time as a seedling in September, 1894, is to-day but a memory, and why? Simply because



CHIONODOXA LUCILIA NATURALISED UNDER TREES.
THE FLOWERS ARE BRIGHT GENTIAN BLUE.

drills before sowing such fleshy seeds as Peas, covering them with similar compost after they are sown. The covering need only be half as thick now as it would be a month or six weeks hence.

Muscari botryoides as a Pot Plant.—We often wonder why a few pans of this and its white variety *alba* are not more frequently potted

ing little vases of a colour which is generally welcome because it is so uncommon. The well-known Heavenly Blue is just as good as the ordinary *M. botryoides*, but it is a little later to flower, and, as might be expected, its blue is deeper.

Two Good Late Hyacinths.—Those who wish to prolong the Hyacinth season in the greenhouse

sell for the past nineteen years it has grown incessantly without a dormant period, its kind have been propagated from cuttings, not seed. Think of the millions of cuttings which have been propagated from that first seedling plant, and then do you wonder, does anyone wonder, why Mrs. T. W. Lawson is to-day but a shadow of its former self

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Erica carnea on Limestone.—*Erica carnea* thrives very well here, though the soil is limestone. It flowers profusely for a long time, and has done so well that I have been intending to get *E. c. alba* as well.—A. C. KIRKPATRICK, *Donacomper, Celbridge, County Kildare.*

—*Erica carnea* flourishes on limestone soil here, and is now in full bloom.—L. LANE FOX, *Hope Hall, Bramham, Yorkshire.*

Lachenalias as Room Plants.—I have pleasure in sending you the enclosed few spikes of *Lachenalia Nelsonii* for your table. It seems a pity that *Lachenalias* are not more popular than they are at present, for one rarely sees a plant in a shop window for sale; nor have I come across any amateurs attempting their culture. They are easily grown, for if potted up in August in good loam and leaf-mould and put in a cool frame or on a shelf of a greenhouse, they come on quite naturally, and flower at a time when pot plants are most welcome. I usually put four to six bulbs in a 5-inch pot.—F. LANSDELL, *Inglewood Nurseries, West Moors, Dorset.* [The *Lachenalias* sent by Mr. Lansdell were the finest we have ever seen, hence we asked him to send us a potful for photographing, which he kindly did. This is reproduced herewith.—ED.]

Pruning Rose Reve d'Or.—Close to where I write is a very fine plant of this *Noisette* growing against the south front of a dwelling-house, where it has been to my knowledge the last twenty years. Viewing this plant yearly and under various tenants, there never was a better example of good and bad pruning of the variety, with attendant results, than in this case. One tenant who understood the requirements of the variety pruned the previous season's shoots to within an eye or two of their base, with the result that he had freedom of growth and abundance of high quality flowers, enhanced as they were with the copper-tinted foliage so characteristic of the variety. This tree, covering a spread of 20 feet long of the southern front of the house and about fifteen feet from the ground, under these favourable conditions was especially attractive. The next tenant, not understanding the variety, never pruned the plant at all, except cutting away a branch hanging in the way. The result was each year a number of small, puny flowers, quite pale in colour, a mere apology for the true blooms of *Rêve d'Or*, which, when well grown, is still one of the most useful Roses sent out by Pernet-Ducher.—E. M., *Hants.*

Carpenteria californica in Ross-shire.—I observe in THE GARDEN of January 10 that *Carpenteria californica* has been "noted in good health as far North as Perthshire, growing in a sheltered position on a rockery." This plant has flourished for about eighteen years in Lochbroom, on the West Coast of Ross-shire, which is more than 150 miles north of Perth. Two plants of this shrub were planted early in the nineties, but succumbed to the cruel frost of 1895, when the

greatest cold ever registered in Scotland was experienced in some districts. In 1906 two more plants were bought, and one of these is now some five feet high, and bears its beautiful white blossoms abundantly. Within the last ten years the thermometer has twice fallen to zero; but a large cotton dust sheet thrown over the plant has saved its life. Prolonged severe frost without the protection of snow would doubtless have killed it, as was the case in 1895. It grows in a somewhat damp, deep soil, protected from north and east winds by a high wall and hedge. On the occasion of a local wedding in July, 1908, it was observed that some of the estate employés wore in their button-holes the white, star-like flowers of *Carpenteria californica*, probably the first time that this flower had been worn by kilted Highlanders.—A. F.

Peat Moss Manure.—For the last twenty-five years or thereabouts I have used peat moss manure—scores, indeed, I may say, hundreds of tons—for all purposes, on grass land and in the kitchen and



A BEAUTIFUL POTFUL OF LACHENALIAS. THESE ARE EXCELLENT FOR THE DWELLING-HOUSE.

flower garden, fernery and rockery; and I can confidently say that I cannot call to mind a single loss or catastrophe which could be laid at the door of peat moss manure. I could give you proofs to the contrary, viz., to the good effects of it, but I am afraid of encroaching too much upon your valuable and justly popular pages. I have used it at all seasons and in all ways, sometimes fresh from the stable or nearly so, sometimes after lying by for months until wanted, sometimes as a top-dressing, at others dug or trenched in. I have just ordered another truckload of four tons.—W. SERJEANTSON, *Acton Burnell Rectory.*

—The correspondence re peat moss manure is interesting. Perhaps my experience may interest your readers also. When forming a new kitchen garden here, the site selected was a part of the game coverts, and contained a number of Oak trees and the usual undergrowth,

such as Alder, Ash and Hazel. After this was all cut and cleared, it was found that nearly a quarter of the land consisted of peat bog, and those of your readers who are familiar with Surrey bogs will realise the difficulties we had to contend with. All my friends who saw the work in progress said we should never make a kitchen garden of that site, and I got very little support except from my employer, who generously upheld me in my opinions. Some five years have elapsed since we finished the work of trenching, draining (a big item in the bog), path-making and wall-building, and we have never been sorry that we persevered with the task. The first year the crops were not good. This was expected from the acidity and crude nature of the land, it never having previously been cultivated; but in succeeding years there has been very little to complain about, the crops having been good and quality first-rate. I soon found out that Strawberries flourished amazingly in the peat, and strong growers like

Royal Sovereign we have to plant 3 feet apart each way. Even then at gathering-time it is difficult to avoid treading on some of the fruits. Celery, Onions, Leeks and Carrots did not do well the first year or two, but after cultivating the land a few times they grow as well on the peat as in other parts of the garden. At the time we were making this garden the work of demolishing the old residence was going on, and all the old mortar to be obtained was carted to the site and worked in during the process of trenching. Lime works wonders in a peaty soil, and doubtless the large quantity of old mortar which we used went a long way towards making the garden a success. The peat is now slowly losing its original character and gradually becoming a black powdery soil. We get a certain amount of peat moss manure from the stables here, and this is always used for top-dressing. It takes a long time to decay and holds moisture like a sponge, and on this basis I believe it to be most suitable for hot, dry soils rather than for those of a loamy character.—S. W. PHILPOTT, *The Gardens, Anstie Grange, Holmwood, Surrey.*

—I have read with interest the different opinions of eminent readers of THE GARDEN on the use of this manure. I note in March 14 issue that Mr. Bensted anticipates using the manure for *Rhododendrons*. I will give my experience on its use for these. I found here a quantity of *Rhododendrons* planted in an open piece of ground, and looking anything but happy in their surroundings. We selected a piece of ground and had it double-trenched, and a large quantity of this manure was used; also, after trenching, a quantity was spread on the surface, and in this the *Rhododendrons* were planted. The manure was incorporated with the soil in the process of planting. I am pleased to say they are now doing well and showing a quantity of bloom. I have also used the manure in a similar way in making a small Heath garden with excellent results. I may add that the manure was used in a fresh state in both instances.—E. PERCIVAL, *The Gardens, Croydon Hall, Washford, Somerset.*

Viola Jackanapes.—What has become of this distinct kind? I have quite lost it, and cannot find it anywhere.—T. SMITH, *Newry*.

A Little-Known Snowdrop.—I do not think that the beautiful *Galanthus Icaria* is proving as hardy as was generally expected when it was introduced. It is certainly hardier than *G. bifolius*, but it is really not so dependable in the north as we would have expected. For some time I anticipated that it would be quite hardy, and this anticipation was rather borne out by the experience of several winters. In other seasons, however, the handsome arching green leaves suffered from late frosts, with the result that the bulbs did not do much good afterwards. This is unfortunate, as *G. Icaria* is a handsome snowdrop, with large, well-formed, pure flowers, while the broad, green, arching leaves have a size and aspect of their own which renders them specially fascinating. *G. Icaria* comes from the island of Nikaria in the Mediterranean.—ARNOTT.

Acacia dealbata on an Outdoor Wall.—A very fine specimen of this *Acacia* (the Silver Wattle) is now growing on an outside wall in the Newton Glen Gardens, the lovely Hampshire residence of Major Tinker. The tree covers a wall space of 15 feet by 12 feet, but the branches are not trained closely to the wall. The general health of the tree is good, and it has passed through the winter without any special protection. The aspect is a south-west one. On the walls of the mansion, and having a similar aspect, there is a splendid plant of *Cotoneaster angustifolia* bearing the rich orange red berries in greater profusion than any plant I have previously seen. In the same gardens the English Yews are laden with blossom. The trees are grand old specimens, and when Mr. Weaver, the capable head-gardener, shook the branches, the cloud of pollen dust resembled smoke rising from a bonfire.—AVON.

Iris unguicularis (stylosa).—I suppose there is nothing in the hardy plant way in winter-time endowed with so much grace and charm as the German Iris, albeit it is not inclined to give its best if exposed to all the rigours and changes of an English winter. To have flowers of such exquisite delicacy as these possess, however, the plants are well worth protecting—well worth specialising in, it may be—in a sunny frame, so that the protection they need at flowering-time might be given without inflicting any check on the plants themselves. In such a frame the warmth, which is apparently so much to this species, would be more readily forthcoming, while the somewhat earlier growth such conditions ensure should also conduce to an earlier—perhaps also more certain—flowering. In any case the species in all its forms is so good as to merit special care where winter flowers of it are requested. Of most importance, culturally, is the warmth—that of soil, the product of perfect drainage as much as that of position. In connection a limy soil and firm planting should not be overlooked.—E. H. J.

Lavender in Association with Roses.—The notion of forming a carpet to Rose-beds is often rather perplexing. Violas are favourites with many, and in some cases they may answer very satisfactorily. It often happens, however, that the Violas grow too strongly, completely overrun the bed and choke the Rose bushes. Where this is the case, I would advise the use of Lavender. The variety *nana compacta* is excellent for this purpose. It should be planted rather sparsely

throughout the beds. Straight lines should be avoided in planting. Irregular planting gives the appearance of a carpet, and by the exercise of a little care in the arrangement a nice finish can be obtained. If desired, the flower-stalks can be cut off as they appear. This is not necessary, however, as the flowers of the Lavender will associate with most of our garden Roses with perfect harmony. The Lavender grows very dense, and will require lifting and dividing annually, except in the case of large beds, where it may remain for two years if desired.—C. R.

Spiraea lindleyana.—The attention of readers is called to this beautiful shrub on page 82, issue February 14. I should like to supplement the remarks by stating how useful I have found this *Spiraea* for planting on the north side of a wall. Until I had experience with this subject in this position, my opinion was that it was somewhat difficult to manage. In a Hertfordshire garden, where it was planted in good soil and in a sheltered position, it was a complete failure. The reason for this I cannot account for, as it was not damaged by frost; but it did not make any growth, while many other varieties of *Spiræas* near by grew and flowered very freely. In Ireland a small plant grew into a large bush the first season under a north wall. In these gardens a plant in a similar position is most satisfactory. It makes strong growth, and during September is one of the most conspicuous subjects in the garden. This shrub is in ordinary garden soil. Its height is 10 feet. Pruning consists of the removal of weak shoots and the cutting of strong growths back to a good plump bud. This may be done after the flowering season or at the present time.—COLIN RUSE, *Folly Farm Gardens, Sulhamstead, near Reading*.

A White Sport of Saxifraga Boydii.—More than fifteen years ago I reported to THE GARDEN that a specimen plant of *Saxifraga Boydii* which I had planted out on a grave had suddenly yielded white flowers in some parts of the tuft, although the same plant had been in my possession many years previously and had never shown this variation, nor had I ever had the variety alba in my possession before that time. The strangest thing, however, was that with this change to white also resulted the more robust growth of the variety alba, which latter it resembled in every respect. One of your correspondents at that time replied to my note that most probably a shred of the white variety must have been compressed within the cushion, and, released from this pressure through the planting out, had started into growth. This theory did not seem plausible to me at the time, as the stronger growth of the white variety ought to have asserted itself sooner, and now I have proof positive that it must have been a sport. Last autumn I divided a large tuft of the yellow *S. Boydii* into—nearly all—single rosettes, and in this way obtained 250 plants. A great number of those now bear yellow blossoms, but one offset with two tiny rosettes bears on one of these a pure white flower, the other one remaining barren. The plant is too small as yet to be able to judge whether the leafy growth has also changed its character.—E. HEINRICH, *Planegg, Bavaria*.

FORTHCOMING EVENTS.

March 31.—Cornwall Daffodil and Spring Flower Show as Truro (two days).

April 1.—Liverpool Horticultural Association's Spring Show (two days).

SEASONABLE NOTES ON CARNATIONS.

THESE are some things connected with the constitution of the Carnation which are difficult to reconcile. For instance, hardy as we know the plant to be, there are varieties and also sections—the Malmaison and yellow grounds—which would die out were they to be treated as hardy plants, though both have been known to exist, under special conditions, for years in the open. There is the fact, too, that the healthiest layers are produced from pot-grown plants. I refer here, of course, to borders, and the rule is, with those who view the Carnation from the narrowest point, namely, that of a florist's flower and for exhibiting, that they must grow the plants in pots to produce flowers of the best quality.

Raising from Seed.—If we go to the other extreme, the person who has no glass to fly to—not even the tiniest bit of a frame—need not despair of producing Carnations, provided he grows them as biennials and from seed. I daresay those who have always raised seedlings under glass would be horrified at the thought of submitting choice seeds to the keeping of ordinary soil, however suitably prepared, and left to the tender mercies of a wicked climate without any protection whatever. Still, it is true that Carnations do extremely well when sown in the open about this time of the year and treated as ordinary biennials. The point to bear in mind is to cover the seeds very slightly. If in rows, less than half an inch deep will do; if broadcast, pat down the seeds with the back of a spade, but ever so gently, and sprinkle some light material evenly over the whole bed. When the seedlings are 2 inches or 3 inches high, transplant to 12 inches to 18 inches apart, choosing a place where they can be left to flower, though they may be transplanted in the autumn if necessary. It is after propagating stock from selected seedlings that the peculiarities of the Carnation as a partially hardy plant appear.

Perpetual-Flowering Varieties.—The time is near at hand when the early propagated Perpetual-flowering Carnations must be shifted into 6-inch pots from the 4-inch ones in which they have been laying the foundation of handsome plants. The compost from this time should be considerably coarser than has been used hitherto, and crushed mortar from plastered walls must be added in sufficient quantity to render it perfectly porous. The plaster contains a portion of hair, which may serve instead of decayed manure; but a little leaf-soil may be added, provided it is not inert, as so much of it is when reduced by age.

The results of an interesting election of Perpetual-flowering Carnations appeared recently in a contemporary, from which it would appear that a few varieties only are popular, the new Mary Allwood having the greatest number of votes in the novelty section. The name reminds me that Messrs. Allwood Brothers have issued a second Carnation list for the season, in which a selection of standard varieties is given, with the names of those superseded. About one hundred and seventy varieties are named in this list, and then it is incomplete, an indication of how things are going. Mr. Dutton's list, like that just mentioned, is beautifully produced.

Tynninghame.

R. P. BROTHERSTON.

PRUNING ROSES.

(Continued from page 144.)

IN pruning Roses, whether it be a standard or bush, if possible cut to an outward-looking bud. This will give the plant the necessary symmetry, or at least it will go a long way towards doing so. I prefer good, sharp secateurs instead of a knife, but they must be sharp, or they will jag the ends. Cut as close to the eye as possible without actually touching it. The

First Year of Planting, Roses should be severely pruned. Those planted in the autumn and early

growths to develop for next year. Briar Roses, species, Scotch Roses and similar wild-like tribes may be left unpruned the first year, except in the case of a Briar hedge. In this case cut down one or two growths to the base, in order to encourage a thickening of the hedge at the base.

Roses Potted Up in Autumn are pruned fairly hard in early April and allowed to grow outdoors the first summer.

General Hints on Each Group.—Brief notes upon each of the groups may be helpful to readers. These hints refer to established plants. I may here say that when so many inches are given, this refers to the growths made last summer, the first growths, not the autumn shoots. These latter,

tipping its growths. One or two of the stronger growths may be cut back to dormant eyes. Willowmere, Cissie Easlea and Lyon Rose will be treated on the same lines, and Rayon d'Or also where its wood is sound. Juliet, Soleil d'Or and others resembling Soleil d'Or have their young wood retained some 2 feet in length, and, if desired, established plants of Juliet may be pegged down or spread out on a wall.

Hybrid Perpetuals of moderate growth, such as Victor Hugo, prune hard to within 2 inches or 3 inches; the more vigorous, such as Charles Lefebvre, to about five inches or six inches; and the extra vigorous, like Hugh Dickson, as advised for Hybrid Tea J. B. Clark.

Polyantha Roses for edging prune back nearly to the ground line; but if for big bushes, just tipping the shoots is enough. One may have Perle d'Or 12 inches to 15 inches high each year, or, if left alone, 3 feet to 4 feet, very quickly.

China or Monthly Roses.—The common Monthly needs but little pruning, excepting occasionally to cut clean out an old growth or two; but the varieties of Tea origin, such as Comtesse du Cayla, treat as Tea Roses. In sheltered gardens or if on walls they may be left alone.

Bourbon Roses treat as Hybrid Teas. In the Moss, Provence, Gallica, Damask and alba leave the young growths from 6 inches to 12 inches long and freely cut out old wood.

Rugosas or Japanese Roses require little or no pruning, excepting where grown for the display of fruit or seed-pods; then they are best pruned back to about eighteen inches from the ground, and even harder. Conrad F. Meyer is best treated as a free bush, leaving its growths from 3 feet to 6 feet long, or, if on a wall or pillar, to 10 feet or 8 feet long.

Scotch Roses, Austrian Briars, Penzance Briars and Rose species are not pruned, as they flower best on the twiggy shoots; but old wood should be cut out well.

Banksian Roses need no spring pruning. Leave all the spray growths possible. After flowering cut out old growths, but not too severely. These Roses like to have a good roasting on a south wall.

Pruning Special Varieties.—I have already alluded to some, but Frau Karl Druschki often troubles some growers. It is so vigorous, and one wants to know how to use it. If for bedding, I would either peg down the young growths when fit or just dig up the plants in October and plant them again in the same position; then prune hard in spring. This Rose may also be grown on the long pruning plan, *i.e.*, leave the growths from 2 feet to 3 feet in length. This might do in most gardens, but not where Roses are used as bedders. Or one may use Frau Karl Druschki as a climber, planting it and Hugh Dickson upon a fence or wall, and they will bloom splendidly if but moderately pruned. William Allen Richardson answers well as a bedder if pegged down, and it will send up fine growths in late summer that will bear beautiful clusters of bloom in autumn. Other strong Roses of like nature, such as Belle Lyonnaise and Billiard



BLOOMS OF ROSE ENTENTE CORDIALE, A BEAUTIFUL CREAMY WHITE GARDEN VARIETY THAT MUST NOT BE CONFUSED WITH ANOTHER OF THE SAME NAME. (See page 157.)

spring may be pruned by the end of March, but those planted in March and April are best pruned at the time, or immediately afterwards. By pruning hard I mean to within 3 inches or 4 inches of the base of the plants, excepting a few varieties to be afterwards mentioned. Newly planted ramblers of the wichuraiana type should be cut down to within a foot of the ground all save one or two growths to bloom, these to be afterwards cut down in August. By this time young growths will be well advanced from the base to furnish flowering wood for next year. The multiflora group when newly planted are best pruned back to about twelve inches; but if one desires to see a little bloom, one good ripened growth may be retained full length. Recently planted climbing Tea, Hybrid Tea and Noisette Roses planted against walls prune back to 2 feet, excepting the climbing sports of Hybrid Teas, such as Mrs. W. J. Grant, Paul Lede, Marquise de Sinety and Lady Ashtown, which are best retained almost full length if they have wintered well.

Weeping Roses the First Year.—Prune the multiflora group back to 6 inches or 8 inches; the wichuraianas leave unpruned. After flowering, most of the growths of this latter group should be cut back hard, which will encourage new

where very soft and pithy, should be cut back hard, say, to three or less eyes from their base.

Hybrid Teas of moderate vigour, such as Mrs. W. J. Grant, prune to 3 inches or 4 inches; those stronger, such as Mme. Ravary, to 5 inches or 6 inches. In both cases small, lateral shoots are cut hard to within one or two eyes. On the very vigorous Hybrid Teas, such as J. B. Clark, Mrs. Stewart Clark, Sarah Bernhardt and Avoca, retain growths from 1½ feet to 2 feet long, and even longer if desired.

Tea Roses should be pruned the first and second week in April. Leave one growth a good length, even if it has started shoots, which will doubtless be injured by frost, but which will break out again. The other growths prune to good dormant eyes, even to within 2 inches or 3 inches of their bases. Of course, where such Roses are on walls, very little pruning is required, but the growths should be well spread out.

Pernetianas.—This modern group may cause some uncertainty in the minds of readers. Discussing it recently, someone remarked that the frost generally did the work for us; but this is not so with some kinds. For instance, Arthur R. Goodwin is quite uninjured by frost, and I am going to treat it on the moderate pruning plan, merely

et Barré, answer well if treated thus. I love to see these so-called Climbing Teas and Noisettes grown as single specimens, where their growths bend over and are covered with flowers. They also do well trained as espaliers or V-shaped cordons. In this case they are spurred back as one would a Pear tree, and plenty of bloom results.

Single Roses.—Some of the beautiful single Teas and Hybrid Teas, such as Irish Elegance and Irish Simplicity, are best left unpruned; so also is Gottfried Keller, another gem. This Rose resents the secateurs or knife, and should be partially pegged down. Roses on banks should be thinned of old wood every year, or they soon become unmanageable thickets. It is better to have a few fine young growths covered with showy clusters than a heterogeneous mass of shoots, unless foliage effect be our object; then it may be admissible to let them grow as they will.

DANECROFT.

ROSE-GROWING IN TOWN GARDENS.

THE Dwarf Polyantha or Pompon Roses, though of comparatively recent introduction, have already attained wide popularity, and the town gardener has not been slow in recognising their merits. They are of the easiest possible culture, by no means particular as regards soil, and they flower continuously throughout the summer and autumn months. Equaling the Geranium in freedom of flowering and in effect, far surpassing it in individual charm, it is small wonder that these dainty little Roses are becoming increasingly popular as bedding plants in place of more formal subjects. Their chief use in the garden is for bedding, and the best effect is obtained by massing them together.

For front gardens, where a neat and orderly appearance is usually preferred, these Roses are undoubtedly among the best plants that can be used for the purpose. A number of beds, each filled with a different variety, give a welcome change from the rather monotonous scheme generally favoured. This arrangement has the advantage of being a permanent one, and the Roses when properly planted require comparatively little attention afterwards, though they must, of course, be kept clean. Polyanthas are also useful as edgings to Rose-beds, and with the range of colour now obtainable, there is no difficulty in providing suitable companions for any of the bedding Roses. When used in this way, they should be kept dwarf by cutting them down almost to the ground-level each year. The plants produce fresh basal growths in the greatest profusion, and this method of pruning seems to suit them well. Another way of utilising them is to grow them in pots out of doors; and town

dweller with restricted gardens might well make more use of pots, both for Roses and other subjects.

Those without greenhouses are often chary of employing them because of the difficulty of keeping the pots cool during the hot weather, a frequent cause of failure. When exposed to the sun they become so hot that excessive evaporation, dryness and consequent injury to the roots are inevitable; but this difficulty can be avoided by having a few small stands made, similar to window-boxes on legs, in which the pots may be placed. The intervening spaces should be filled in with Coconut fibre, which will help to keep the pots cool and check evaporation. There are many gardens in which stands of this description could be employed to advantage. Often there is a tiled or cemented approach to the garden from the house, which would look far more attractive if relieved with a few plants of some sort, and Polyantha Roses are as pretty and easily grown as anything that can be used for the purpose. One must, of course, have a sunny and rather sheltered spot for Roses grown in this way, and proper soil for potting is essential. Where only a few are grown, it is best to procure this ready mixed from a nursery. Almost all the Dwarf Polyanthas may be grown successfully in towns.

Some of the best and hardiest are Erna Teschen-dorff, dark crimson; Jessie, crimson scarlet;

A GOOD GARDEN ROSE.

BEFORE the planting season is quite over, it may be of interest to draw attention to a very useful and beautiful garden Rose, viz., Entente Cordiale. Unfortunately, there are two Roses bearing this name; hence, in ordering, it is necessary to mention the raiser's name, M. Pernet-Ducher. The other Entente Cordiale is a worthless Rose, and will, one may hope, soon sink into oblivion. The one illustrated on page 156 is of creamy white colour, and the bush is compact, yet moderately vigorous and very free-flowering. The blooms at all stages are very charming indeed, especially when about two-thirds open, as shown on the right of the illustration. They are fragrant and have long stems, so that they are excellent for cutting. One would like to see this Rose more frequently grown.

A. B. ESSEX.

A NATIVE SPEEDWELL.

VERONICA SPICATA.

ON the mountain limestone hills near Llandudno and in other parts of neighbouring counties this beautiful native Veronica grows wild and flowers in profusion in July and August. The flowers are borne in spikes of bright blue, rising about a foot from the ground. For the rock garden this Veronica is much to be commended. It



VERONICA SPICATA, A BRITISH PLANT FLOWERING PROFUSELY IN THE ROCK GARDEN.

Mrs. W. H. Cutbush, rose pink; Yvonne Rabier, white; and George Elger, yellow. Cecile Brunner, one of the prettiest and most distinct, is less hardy, but makes a beautiful miniature pot Rose. Very pretty effects may be obtained by growing Roses in pots in the manner described. A number of other interesting varieties were mentioned by Mr. H. E. Molyneux in the issue of THE GARDEN dated January 31.

P. L. GODDARD.

will clothe bare corners in either sunny or partially shaded positions, and continues to flower for many weeks. It may be raised from seed sown now, and its cultivation is of the very simplest. Under cultivation this wilding has been much improved, the flower-spikes being stronger and of deeper colour. There are a few varieties in cultivation, of which alba, rosea and hybrida are perhaps the best known.

HARDY HEATHS.

(Continued from page 146.)

It is not given to everyone to possess facilities for the making of an ideal Heath garden such as I have attempted to describe; still, as I have already said, much can be done in ordinary circumstances to introduce a few of the best of each kind in most establishments, more particularly since the fashions in flowers have practically ousted the tender varieties once so common in our greenhouses, these being now principally confined to a few trade growers, who, along with Continental growers, produce a selection of the most useful for winter decorations. Several of the hardy Heaths, however, can be used for this purpose, and although less showy and floriferous, if potted up in autumn will come into flower at a time when, flowers being somewhat scarce, they

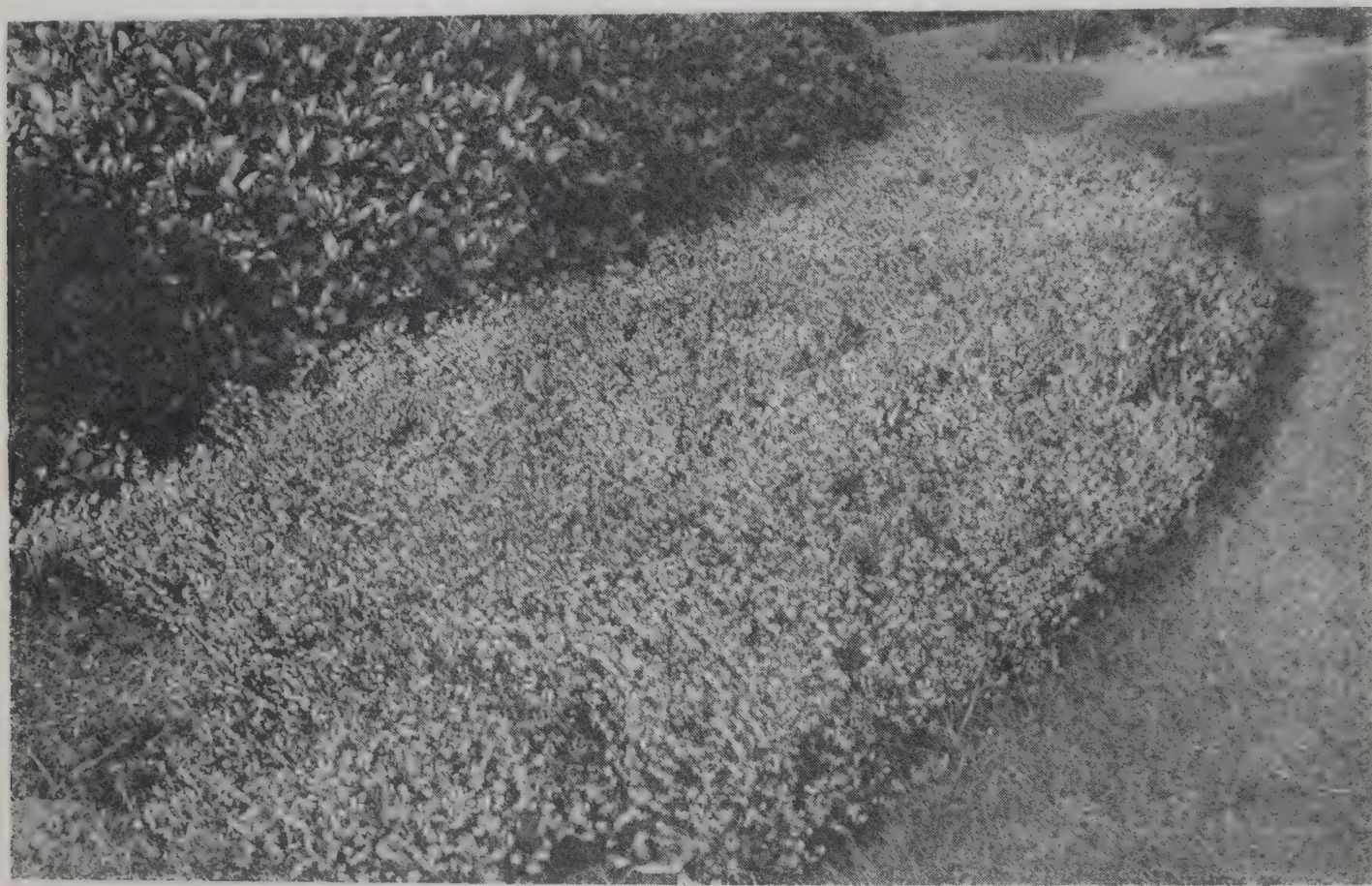
cutting with the thumb and finger. It will be found, however, that some varieties will require more care in this respect than others, as in the act of stripping off the leaves the bark becomes damaged. Some propagators prefer to allow the leaves to remain on the cuttings. The prepared cuttings should be dibbled closely into suitable-sized pots, these being filled to half their depth with crocks, over which place a layer of fibrous peat, and then fill the pot to within an inch of the rim with a mixture of finely sifted peat and sand in equal quantities. This should be made moderately firm before placing a layer of silver sand on the top. The pots should then be watered so that the cuttings can be dibbled in with ease, filling up the holes left by the dibble with a sprinkling of dry sand. They should then receive a thorough soaking of water, and be allowed to drain properly before placing them in the position in which they are to be rooted, which may be under bell-glasses if a small quantity only, or,

dwarf varieties, having a somewhat tufted habit, only require lifting and breaking up to increase the stock or extend the plantation. Taller-growing and leggy sorts may be layered by simply pegging down a few of the shoots where they are growing, or a few plants of each may be planted deeply in a light, sandy compost, just leaving the points of the shoots above the ground, when they will root readily and provide a large increase of stock.

When the plants have just finished flowering, they may be cut back slightly to keep them longer in a stocky condition, as many of the varieties, if left without attention, will very soon become straggling and leggy. This must, however, be done with care, for if cut back too hard they will not again start into growth. I find *E. carnea* the most suitable for forming edgings to walks, where it grows freely in our light, sandy soil and forms a much more interesting subject than the

orthodox Box edging. *E. vagans* is also suitable for this purpose, but it gets out of order sooner than the former and does not stand clipping so well.

A Useful Selection.—In giving a few names of the best varieties and their approximate season of flowering, I do not attempt a full list, as this can be had pretty correctly from nurserymen's catalogues, but confine myself to a few of the most distinctive sorts which I have found to thrive well under ordinary conditions. The first to open its flowers in the New Year is usually *E. multiflora*, growing about two feet high and having pale red flowers. *E. arborea*, with white flowers and forming large bushes; and *E. codonodes* or *polytrichifolia*, a beautiful pure white with pale green foliage, attaining a height of 4 feet, are also in flower in January if the weather is favourable. During February and March we have that free-growing and free-flowering dwarf variety *E. carnea* and the white form usually sold under the name of *E. herbacea alba*. *E. carnea* is worthy of special mention, and some idea of



THE EARLY-FLOWERING ERICA CARNEA. THIS HEATH BLOOMS PROFUSELY FROM FEBRUARY TILL APRIL.

will be much appreciated for greenhouse and room decoration. *E. carnea* and *E. herbacea alba* are eminently adapted for this purpose. Coming into flower early in the year, *E. mediterranea alba* is another variety which succeeds well as a pot plant, as also do *E. multiflora* and *E. codonodes*, while several varieties of *E. vulgaris* are well adapted for the same purpose.

Increasing Heaths.—Propagation by seeds is not in general practice unless for the raising of hybrids, and the process is naturally a slow one. Raising a stock from cuttings also takes a considerable time, but is found necessary for increasing the stock of any new or rare variety. This can be successfully accomplished if half-ripened shoots of the current year's growth are used; these are made about two inches long. The best cuttings will usually be found in the small, wiry growths towards the base of the main shoots. They should be cut across with a sharp knife, and the leaves stripped off from the lower half of the

if in large quantities, a close-fitting frame will be best. Place the pots on a bed of coal-ashes where a temperature of 50° to 55° can be steadily maintained, keeping the frame as nearly airtight as possible. The cuttings should be shaded from the sun, and in giving additional waterings a careful watch must be kept for condensed moisture on the inside of the glass lights. This must be wiped off as it appears, or the drips will cause damping. These conditions must be followed until the cuttings are rooted, after which air must be very gradually admitted, and the young plants exposed to more light to get them hardy enough to be transferred to cold frames. As I am now dealing with tiny rooted plants, the next operation should be to plant them in lines in a cold frame, where they may remain for a year at least before being put in the open ground. When, however, a good stock of plants has been once obtained, this slow method of propagation may to a large extent be dispensed with. The

its manner of growth and the great freedom with which it flowers may be obtained from the accompanying illustration. Covering the period of March to May the principal varieties in flower include *E. mediterranea*, another dwarf variety in red, pink and white shades. A tall-growing sort under the name of *E. m. multiflora* flowers in August; this is a very distinct variety, having white flowers, with prominent chocolate-coloured anthers. *E. australis* and *E. Stuartii* are generally in flower in the month of June, the former, about three feet high, having purplish red flowers, and the latter, a neat, dwarf-growing plant of 6 inches, with pretty rose-coloured flowers. A hardy Heath garden, I think, would be incomplete unless it included in the selection some plants of the lovely St. Dabeoc's Heath (frequently alluded to as the Irish Heath, *Menziesia polifolia*), *M. p. alba* and *M. empetrifolia* being good representatives of this genus.

Glamis.

THOMAS WILSON.

THE GENUS ROSCOEA.

COLOURED PLATE 1490.

IN many ways this is a remarkable genus. For one thing it is the only hardy genus in the family of Ginger-worts, a family which includes, besides the Ginger Root (*Zingiber officinale*), such well-known plants as the Banana, Canna and the beautiful-leaved *Maranta*. The genus *Roscoe* was so named in honour of William Roscoe, who died in 1831, after having made a name for himself as a historian and in having founded the Liverpool Botanic Gardens, which are now under the charge of Mr. W. Hackett, late of Kew. Until the discovery of *R. cautlioides* in China by Mr. Forrest, it was considered that the species of *Roscoe* were confined to the Himalayas.

Roscoe sikkimensis (No. 1) although classed with *R. purpurea* by botanists, is quite distinct, as will be seen in the coloured plate. It was found about one hundred years ago, but is by no means common in gardens even yet. Scarcely one foot in height, it produces leafy stems, each bearing several bright purple flowers. The form of the flowers has led many casual observers to mistake them for the flowers of Orchids. The dorsal lobe of the three-parted corolla stands erect, and is usually somewhat hooded. The roots are tuberous and do well in sandy loam, surviving our winters readily when planted 4 inches to 6 inches below the surface.

R. purpurea Bees' Variety (No. 2 in the coloured plate) is a very handsome, well-marked form. Its claim to distinction lies in the boldly enlarged labial lobe, and in the rich wine purple colour.

R. cautlioides (No. 3) is probably the most vigorous of the family. It is certainly one of the most charming of flowers. The colour—a soft delicate primrose, rather full in tone—reminds one of the particular shade of yellow seen in *Meconopsis integrifolia*. As many as half a dozen flowers are produced on each 9-inch to 10-inch stem. It is a beautiful flower, with all the delicate beauty and texture of a Poppy. Found by Mr. George Forrest, in Yunnan while collecting for Messrs. Bees Limited, of Liverpool, it has proved quite hardy in North Wales, and also, we understand, in the gardens of the Royal Horticultural Society at Wisley.

R. alpina is another importation by Mr. Forrest. It is a fine purple and is likely to oust *R. sikkimensis*, being of free growth and very hardy.

The *Roscoe*s are admirable plants for the rockery. Enconced in some well-drained pocket of sandy loam, with ample depth to root into and with plentiful supplies of moisture during the growing season, these rare and lovely plants will give a good account of themselves. A colony of the different sorts, yellow blending with purple, would be enchanting. We are indebted to Messrs. Bees Limited, of Liverpool for the flowers from which our coloured plate was prepared.

SOME GOOD ANNUALS FOR CUTTING.

INEXPENSIVE and easy to grow as are the majority of annuals, some of them stand unequalled throughout the summer for supplying the ever-increasing demand for cut flowers. In some gardens this demand is often the means of spoiling, more or less, the effect that was aimed at when planting. In cases where space is limited, this cannot very well be avoided. But where a convenient plot in the kitchen garden can be set aside for the sole purpose of planting for cutting,

do without any further trouble. In the different varieties of *Calliopsis* we have ideal flowers where lightness in arranging is necessary. Some of the best are *C. Drummondii* (brilliant yellow), *C. tinctoria* (yellow and brown), and a good dark red one is *C. atrosanguinea*. The annual *Chrysanthemum* is now indispensable. Of the many varieties to be had, *C. burridgeanum*, with red and white flowers, is as useful as any. *C. White Pearl* is always admired. *C. Golden Cloud* is well named, as the flowers are a true gold colour. Cornflowers in their various shades are always effective with *Gypsophila elegans* and *G. carminea*. *Clarkias* and *Godetia*, when given plenty of room, make graceful spikes of bloom that are not to be

despised. *Nigella*, white and blue, is a general favourite. The Sweet Sultan in different colours is well worth a place, and for fragrance *Mignonette* is indispensable. Everlasting flowers find favour with many, and in the different colours of *Helichrysum* they are seen to the best advantage. No list would be complete without Sweet Peas, the culture of which is described from time to time in these columns.

Half-Hardy Annuals.—The under-mentioned varieties are half-hardy, and should be sown under glass towards the end of March in boxes of light soil. When large enough to handle, they are pricked out in boxes or frames and kept steadily growing until about the middle of May, when they are gradually hardened off, to be planted out when all danger of frost has passed. Asters of the single and Comet type, with the variety known as Ostrich Plume, are light and graceful, and the best for cutting. The tall-growing *Ageratum mexicanum* provides a quantity of blue flowers. *Cosmea* is a desirable race of free-flowering plants, in colour white, rose and crimson. *Nemesia*, though usually regarded as a true bedding plant, is very effective indoors. *Salpiglossis*, owing to its magnificent colours, has no equal among its class. In Webb's strain known as Harlequin it is seen at its best. *Phlox Drummondii* is none the less admired when cut. Stocks, for their delightful fragrance, are essential to every garden in the summer, and when cut are never out of place. Apart from the necessary hoeing and weeding, with an occasional watering in very dry weather, all the above are of the easiest possible culture, and will flower freely until the colder nights put an end to outdoor growth.

F. G. TOWNEND.

The Gardens, Brentwood, Moorgate, Rotherham.



LILIUM NEPALENSE, A BEAUTIFUL ORIENTAL LILY WITH CITRON AND PURPLE BLACK FLOWERS.

it will be found most agreeable and convenient. In such a position, or wherever annuals are to do themselves justice, the soil must be made suitable by good digging and manuring in the proper season. Previous to planting or sowing, it is an advantage to thoroughly break up the surface with a fork, and on the first opportunity after the soil has got in a workable condition make the surface fine and level with an iron rake.

Varieties for Outdoor Sowing.—The following varieties are hardy, and may be sown where they are intended to bloom, and, as soon as large enough, thin out to prevent weakness through overcrowding. This is most essential if the plants are to make sturdy growth and flower as they should

LILIUM NEPALENSE.

If *Lilium nepalense* were only a little hardier, it would doubtless be the most popular of all the Oriental Lilies. It has been successfully grown in the open in Devon and Sussex, but, speaking generally, it should be given cool greenhouse treatment. The beautiful reflexed flowers are very striking in appearance, being citron yellow towards the edge, with deep maroon purple or almost black within. It was introduced in 1855 from the Central Himalayas.

DAFFODIL NOTES.

NOTABLE VARIETIES AT THE FORCED BULB SHOW.

THE two flowers that were most talked about were Queen of the West, which, as I said in my last notes, for the first time in its life sought the suffrages of the buying public; and a glorious deep yellow Ajax of giant size, which for a long time blocked one corner of the eastern annexe with people eager to get a glimpse of its noble proportions. Dinton will know it no more. As Magnificence it will find a new home in the grounds of the Donard Nursery Company in County Down. Mr. Engleheart told me he had gathered it from the open a day or two before the show (March 10 and 11). It would be a striking flower, because of its size, deep colour and the exceptionally wide recurve of its brim, at any season; but blooming as it does so early, its merits become the more pronounced. Diameter of whole flower, 4 15-16 inches; diameter of trumpet, 2½ inches (width of roll of brim, five-eighths of an inch); length of trumpet, 1½ inches.

Queen of the West, the other variety that I have already mentioned, is a large flower of a soft lemon yellow, quite a self. The trumpet is bold and impressive, but the perianth always seems to me to be a little too much on the floppy side and to give the flower a hooded look. This little defect, if defect it be, is more than counterbalanced by its strong stem and superb colouring, which is even more pleasing under electric than under natural light. Those of us who were present at the Horticultural Club dinner on the first day of the show had a good opportunity of judging, as all the tables were decorated with vases of Queen of the West. I imagine it wants a warm, well-drained soil to do itself justice in the garden.

Almost all the varieties that I am about to mention are old ones. Naturally, this must be the case, for I do not think high-priced novelties are what we want at a forced bulb show; rather, those well-tried old sorts which we are finding out lend themselves to pot work. Thora (Walter T. Ware) is one of these *par excellence*. The beautiful tone of gamboge in its short trumpet, which gives the bloom its prominent characteristic, is only brought out when it is grown under glass. Eoster as I saw it in Mr. Christopher Bourne's group looked exceedingly chaste. I have never tried it in pots myself, but as Mr. Bourne assured me that it is splendid for this purpose, and as the proof of the pudding is in the eating, I feel I can give it a commendatory note. Out of doors it is none too robust. Aquarius is a nice, tall-growing Leedsii, with the edge of its cup speckled with yellow and apricot. Some remarks which I overheard were not very favourable; others denoted that the makers thereof were impressed. The idea is rather far-fetched, but I imagined this quaint marking made the flower a little like the old alba regalis of the Tulip kingdom. Felspar (3½ inches by 1½ inches by 1½ inches), also on Messrs. Cartwright and Goodwin's stand, looked very well indeed. Another Giant Leedsii, Capella (3 inches by 1½ inches by 1 inch), as pretty a flower as anyone need wish to see, was in fine form on Messrs. J. R. Pearson and Sons' stand. Three blooms were perfect. The neat, rounded-looking segments and the well-shaped small trumpet were almost of a uniform ivory white, and the

whole seemed to possess that substance and rich-looking appearance which are synonymous with high quality. I am beginning to call my friend Duncan Pearson's Leedsii the cut-and-come-again strain. First Norah Pearson, now Capella.

Cheek by jowl on Messrs. R. H. Bath's stand were Brilliancy and Flame. Both may be pictured if I say they are glorified Barri conspicuuses. The latter variety is the best and most striking. Its perianth is yellower, and its cup longer and wider than in the older flower, and the whole is larger, the diameter of the perianth being 4½ inches, and of the cup 1 inch. I must couple with this Sparkler, which was in Messrs. Barr and Sons' collection. It is one of the best of the very early red cups.

A pretty double of an uncommon shade was to be seen in Mr. W. T. Ware's small and select group in the flower named Sun Tints. Buff segments and transformed stamens, with orange bits of nectary scattered among them, is its colour description, which, added to the fact that the flower is a good 4½ inches across, and that the divided-up perianth is more regularly deposited than in many doubles, enables us to form some idea of the whole. Sweepstake, which was tucked away in a corner among the blooms of Messrs. W. B. Hartland and Sons, was very striking. It has a great deal of the look of Heroine; in fact, when Messrs. Pearson's head man and myself took a vase of the latter over to compare it, he said he had no idea that there was a flower in existence so much like it. The perianth is smoother and possibly not quite so white, and the cup is larger and with a more clearly defined red edge. Otherwise the two varieties are very similar. I have no idea what sort of a doer Sweepstake is, but it is certainly one to ask about. Silver Glade, a triandrus hybrid, is pure white, with a cup-shaped centre; Queen Mab, a fine bicolor seedling from Penzance; Northern Queen, a delightful pale peerless; minicycla, the tiny minimus x cyclamineus strain of Mr. Herbert Chapman; Hercules, a sort of more refined and yellower Olympia, which was a new purchase by Messrs. R. H. Bath; Inglescombe, a sort of lemon-coloured double Begonia; Florence Pearson—everyone said "how good," but I wish I could have transported a couple of blooms from my greenhouse, just to show what it sometimes can do; Mikado, a spidery-looking yellow Ajax with a twisted, narrow perianth and an expanded trumpet, very early; Lady Margaret Boscawen and Homer (the latter I always find much better than Horace in pots); Alabaster, a beautiful triandrus hybrid, and a potful of another in Mr. Chapman's lot of which I forget the name, but which is easy to distinguish because of its delicate greenish primrose colour, which I am told Mr. Engleheart says can only be obtained from a cross between King Alfred and calathinus.

JOSEPH JACOB.

ORNAMENTAL GRASSES FOR CUTTING.

THERE are many beautiful grasses that may be sown now in the open ground. From midsummer onwards they will be found of great value for mixing with other cut flowers, or, if cut before they are fully developed, they may be dried, when they will be found excellent for mixing with everlasting flowers for winter decoration.

THE GOOSEBERRY SAWFLIES.

THE caterpillars or larvæ of the Gooseberry sawfly are extremely destructive in some gardens during the summer, and quite frequently I have seen healthy bushes entirely denuded of foliage by their ravages. The larvæ, after having gorged themselves, pass down into the soil round the bushes and hibernate there, to emerge the following spring and multiply with astounding rapidity. The gardener who had trouble with them in the previous year may rest assured that they will attack his bushes again, probably in greater numbers than ever, and he should set about putting into practice remedial measures, even though there is not the faintest suspicion of any pest at present.

A good fumigant hoed into the soil during the month of April will account for many of them. Even gas-lime not too fresh may be used, but only lightly worked into the soil; and of the very highest efficiency is road grit containing tar products, which may be spread as a thin mulch over the surface and kept there all the year. The tar, unless present in obvious excess, will not injure the bush in any way.

At times during the month of May the gardener may spray the foliage with an insecticide, as evil-smelling as possible, in order that the flies may be prevented from depositing their eggs on the leaves. Naturally, this may continue until the time for gathering the crop is approaching. It is really wonderful how much can be done by timely preventive work; but if it is neglected until the bushes are alive with the destructive caterpillars, only the most strenuous efforts and the most poisonous preparation will have any appreciable effect. Do not fancy that because the larvæ do not touch the fruit they are beyond consideration. Crops cannot be satisfactory or be of much value under the circumstances, for the leaves are the stomach of the plant, and as such are necessary for its well-being, and even for its existence.

H. H. A.

APPLE ROUND WINTER NONSUCH.

THIS is one of those good old Apples that many years ago were planted more extensively than is the case at the present time. The trees bear very freely and regularly, while the Apples keep sound till March. The fruits have a bright, beautiful crimson colour on the side exposed to the sun, and, although a cooking Apple, medium-sized fruits taken from aged trees are very passable for dessert. I have grafted other less useful Apple trees with this, and am well pleased with the fine fruits yielded during the past few seasons.

APPLE BAXTER'S PEARMAIN.

SOME few years ago I had a few grafts of this Apple sent me by a friend I noticed exhibiting nice dishes of fruits at the Royal Horticultural Society's Hall. The fruits on that occasion were very firm and of nice size. My trees have borne crops for two years, and I find that if left hanging rather late, the fruits keep very sound till March. Although the flavour and flesh are not that of Cox's Orange Pippin, there are many worse Apples grown than Baxter's Pearmain, and anyone planting a few trees will not have much room for regret when once the trees are of fruiting size.

H. MARKHAM.

GARDENING FOR BEGINNERS.

MY SMALL ROCK GARDEN: HOW I MADE AND PLANTED IT.

WHY should not the "alpine" enthusiast make his or her garden, however small, into an alpine garden altogether, and cultivate therein the immensely varied forms of mountain plants which are available, and which, by judicious selection and careful planting and attention, gladden him from January to December? It is now some years since I essayed this congenial task; and since it has produced such a fund of pleasurable enjoyment and healthy exercise, perhaps a rapid outline of my procedure may induce others to extend their rockery upon the same lines.

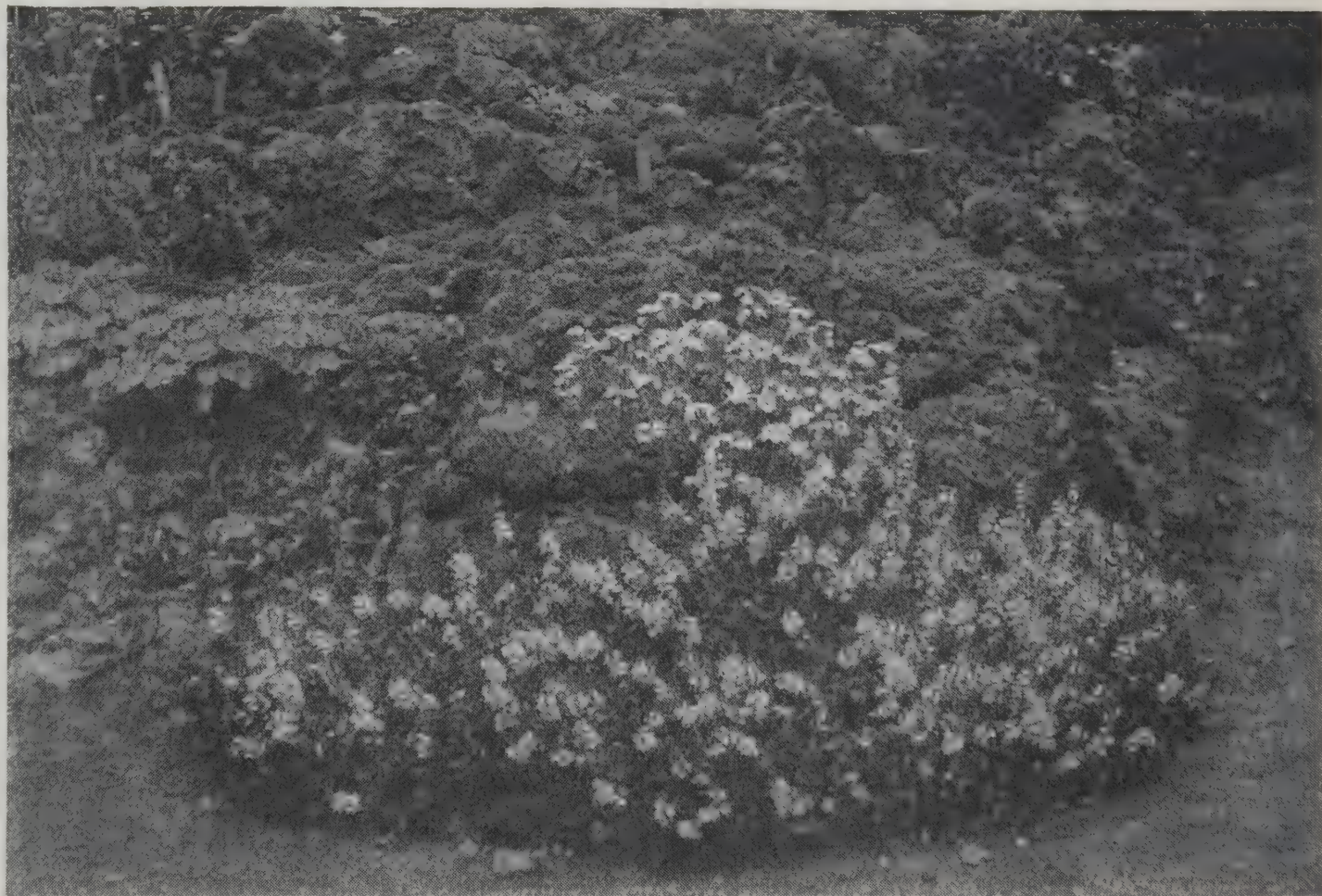
Choosing a Site.—When one's ground measures, let us say, 100 feet by 50 feet, it is little use brooding over which portion of our domain we shall devote to the alpine garden; and, providing there are no overhanging trees and two-thirds of the space receives a fair amount of sunshine, it is quite possible, as in my own case, to devote the whole to the scheme in hand, and, what is more, decoratively furnish it in every part.

The Building Material.—The next problem which confronts the rock gardener is building material. I would like here to emphasise the fact that usually the man with a small garden often has the added disadvantage of a shallow pocket, and however desirable it is to employ the most perfect material, such as mountain limestone (and no one appreciates more than I do the decorative value of beautiful stone), it is often beyond the range of the gardener to obtain such for a reasonable outlay. Anywhere in my neighbourhood such stone will cost from 15s. to 20s. per ton by the time it is delivered, and supposing that thirty tons are needed, the cost is often prohibitive. Writers of considerable experience often suggest that real stone is necessary for the successful cultivation of alpine plants. While the term "success" is, I agree, a difficult one to define, I do, with all respect, emphatically differ from them, and, so far as my experience goes, nothing is so likely to turn the "would-be alpinist" from his project as too much emphasis on this particular. My own garden shows that it is easily possible to cultivate, with a very considerable degree of success, the great bulk of alpine plants, including many of the choicest, without a particle of real stone; and I should strongly urge those who are placed as I am to employ the concrete lumps frequently obtainable near London, and which, I believe, come from beneath the City roads when the latter are being relaid.

Having decided upon the matter of "rock," the next item is soil. The garden in question will doubtless furnish some amount, especially if it is decided to lower one portion of the ground so as to increase the height of the slopes and possibly

form a pool, by the margin of which many water-loving plants will find a congenial home. This can be augmented by a few loads of loam and more of sand—even if the latter is only sweepings from gravel roads. A quantity of builders' refuse is also a very great help, and the coarser portions of this latter can with advantage be spread over the site to act as drainage, should the natural soil, as in my case, be of a close, clayey nature. Having heaped the earth (after well mixing) in the varying masses we wish the design eventually to take, and having decided where the main paths are to be, it is well to start at the lowest point and begin building.

When several are in position, well pack the gritty soil behind them so as to make all firm and solid. After roughly levelling, proceed to place the next higher tier. While a rock bank must be more or less in the form of terraces rising one above the other, care must be taken to avoid formality and to vary the outline by employing blocks of various shapes and sizes; while often a good effect can be secured by breaking across a terrace with two pieces lying at an angle. Arrange for the ground to slope at varying degrees of steepness in different parts. Where a gentle incline is being formed, it is frequently possible to secure an excellent effect by allowing a promontory to jut



VERONICA RUPESTRIS FURNISHING THE PATH EDGE.

Making the Paths.—Every effort should be made to make the paths as irregular as possible, both in the horizontal and vertical direction, thus getting as far as possible from the formal, though care should be taken to make them sufficiently wide to avoid damage to the plants which will eventually mantle the rocky slopes adjoining. Where the path dips, it is better, I think, to form it in a series of steps.

Placing the Rock.—To return, however, to the building. The first thing to do is to well ram the seating, and at the same time give a slight inclination inwards and towards the bank of soil, at the base of which the work is being started. Upon this spot place the first "rock" in such a way that it lays firmly and also has its most decorative face outwards. Next to this put block No. 2, locking them together by their projecting ends, so as to leave no space between them through which the soil will leak, or, failing this, stopping the opening with a smaller piece

out, as though an extra large outcrop was emerging there.

Where the rock bank slopes to the path, arrange for it to fall in a steep buttress in one place, as though a strong shoulder was holding up the mass; then, after making a little bay or inward curve from the path, to come forward again, this time as a more gently rising spur. When viewed from a little distance, the slowly rising buttress will show up in pleasing contrast to the more vertical one. Always use the most select pieces of stone for these promontories, since they can well be left less draped with verdure than the remainder, and so give force and character to the whole. Each stone, no matter what its size, should be so firmly placed and wedged as to be immovable if stood upon, while the earth must always be well rammed behind to form a solid foundation for the higher parts to rest on.

REGINALD A. MALBY

(To be continued.)

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Late Vineries.—All late Vines will be well on the move now, and should not be subjected to much fire-heat; 55° at night will be quite high enough. When the buds become prominent, the Vines should be carefully tied to the trellis, and disbudding accomplished as soon as it can be ascertained which are the most promising. Very little air will be necessary for some time, and this should be admitted early in the day, shutting up the house early in the afternoon to secure a good rise of temperature by sun-heat. The walls and border may be syringed several times daily to promote a moist atmosphere. The temperature of

Muscat Vineries should not be allowed to fall below 70° at night, especially during the flowering period, and at this stage the atmosphere must be kept moderately dry and the pollen dispersed by means of a bunch of soft feathers or a rabbit's tail tied to a light stick. The trellis should also be shaken several times during the day. When a good set has been secured, the border should be examined, and, if necessary, a good watering of clear water given.

Plants Under Glass.

Chrysanthemums.—The early struck plants will now be established in 6-inch pots, and should be given as much air as possible during favourable weather to keep them from becoming drawn. Remove the lights during mild days and replace them at night. Watering must be carefully attended to, giving the plants a good soaking of clear water when necessary. There is nothing more detrimental than frequent dribbling with the water-pot when the soil is neither wet nor dry.

Carnation Souvenir de la Malmaison.—These plants will now require a little shade during the hottest part of the day. Never allow them to suffer from want of water at the roots, and feed them frequently with some approved manure. Young plants should be grown in cool quarters, no fire-heat being necessary. Keep a sharp look-out for aphids, and fumigate before it becomes established.

Sweet Peas in Pots should now be ready for their final potting. Make the soil firm about the roots, and place the plants in a well-ventilated house and fully exposed to the light. When established, frequent waterings of liquid manure should be given.

Winter-Flowering Pelargoniums.—For this purpose young plants should now be ready for potting into 4-inch pots, and when they become well rooted the tops should be pinched in order to produce bushy plants. Do not allow them to become stunted for want of root room, but pot again as soon as necessary. The soil may consist of two-thirds turfy loam and the remainder of leaf-soil, and this should be made moderately firm.

The Flower Garden.

Sweet Peas raised in pots for planting in the flower garden should be exposed to the weather for eight or ten days before they are planted in the open. The ground for this purpose should be thoroughly trenched and manured if the best results are expected, and protection from rough wind must be provided by placing evergreen branches round the plants as soon as they are put out.

Violas and Pansies.—These should be planted out with as little delay as possible. If raised from autumn-struck cuttings and wintered in cold frames, they should be nice stocky plants now, and, if carefully transplanted, may be expected to flower freely in April and May.

Calceolarias in Cold Pits.—The leading points should be carefully pinched out in order to produce numerous side shoots. If space is available in a cold pit, they will benefit by being transplanted into finely sifted soil, allowing a space of 9 inches between the plants.

Seedling Bedding Plants.—Antirrhinums, Pentstemons, East Lothian Stocks and other seedling plants should be pricked out as soon as large enough to handle. Place the boxes in gentle heat until the plants have recovered from trans-

planting, after which they may be grown in a cold frame; but protection from frost should be provided.

Propagation of Bedding Plants should be finished as quickly as possible, either by seed or cuttings, as the time is approaching when many of them will require hardening off. Lobelias may still be raised from cuttings. Carpet bedding plants may be rooted in boxes, where they may remain until required. If large quantities of Alternanthera are required, a hot-bed may be made up for the purpose and covered with finely sifted soil to the depth of 4 inches. The cuttings may be inserted in this, and will quickly make roots; but care must be taken that the heat is not too strong.

Hollyhock Plants which have been wintered in cold frames should be planted out as soon as possible. If grown in large clumps, they form very conspicuous objects during the summer and autumn.

The Kitchen Garden.

The Sowing of Seeds.—The heavy rain so far experienced during March has seriously delayed the sowing of many small seeds; but, although rather late, it is better to defer sowing for some time longer than to trample on the ground while wet, especially if the soil is of a heavy nature.

Potatoes.—The planting of early varieties should be finished as soon as possible. If the tubers have been started in boxes, it is necessary to plant very carefully, or some of the young shoots may be broken. Sufficient space must be allowed between the rows to allow light and air to pass freely among them. The planting of second-early varieties may be pushed forward, covering the sets with 4 inches of fine soil. It is very important that all tubers for future plantations should be laid out singly, so that the young shoots may not become drawn, and for this purpose a well-ventilated shed should be chosen.

Celery.—If seeds were sown in February, the plants should now be ready for pricking into boxes of fine rich soil. If space is available in cold pits, the young plants may be transplanted into these, allowing a space of 6 inches between them each way, so that a good ball of soil may be lifted with each plant when they are placed in the trenches.

Beet.—A sowing of Globe Beet may now be made in a sheltered spot for the supply of roots early in June. Sow in drills a foot apart and cover with an inch of fine soil. Beet in store should be frequently examined and all young growth removed.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Peas.—From now the main crop of Peas may be sown, and to keep up a succession it will be a good guide to sow as soon as a former lot has come through the ground. The taller and larger-podded varieties will require to be sown much thinner, and also allowed more room between the rows. Perhaps the best way of securing a constant supply of Peas of the best quality is to break up the other crops with an occasional row. This will provide a shelter to the lower-growing subjects, and at the same time enable the Peas to get well developed.

Seakale.—The smaller roots secured from crowns before forcing may now be planted out, and this on ground that has previously been well manured. If these roots were placed in a cool house as advised some time ago, growth will now be started. As in the case of sprouted Potatoes, it will be well to reduce the sprouts to one before planting.

Turnips.—Continue to make a sowing of some of the earlier varieties, and, as in former sowings, give the ground a good dressing of lime, which will assist to ward off the fly that proves so troublesome in the seedling stage.

The Flower Garden.

Violas.—If flowers are removed from the young plants until they are established, they will continue blooming throughout the year. At Hopetoun we grow many thousands, chiefly of the variety

Come to Stay, which are used to carpet the ground under Roses. The effect is very striking indeed. It would not, of course, be wise to plant them among choice Roses, or where they are required for exhibition purposes; but for ordinary decorative varieties there is much to admire in this style of decoration. The Viola I have mentioned seems to stand the drought better than any other variety I know.

Annual Lupines.—These are now regarded as one of the most popular hardy annuals of recent years, well deserving a prominent place in any garden. As they do not bear transplanting, they must be sown where they are to flower. To ensure that the young plants will not suffer from slugs just as they are coming up, I find it a good plan to sift some fine soil and ashes, and place it on the border where it is intended to sow them. The seed may be sown now very thinly, and afterwards thin out well, as each plant will make a fine specimen. Hybridus atrococcineus and mutabilis, cream and white, are two of the best, and will be found to be invaluable for cutting.

Melanthus major.—This handsome subtropical subject, so useful as a dot plant in the flower garden, and possessing as it does such beautiful Fern-like foliage, never fails to attract attention. Seed sown now in small pots and grown on in a little heat will make fine plants by the beginning of June, which will be soon enough to risk planting them out.

Pruning Shrubs.—A start may now be made with the pruning of evergreen shrubs, such as Laurels and Yews; but it will be wise to defer interfering with Box trees for some time yet. The pruning of Laurels should, as far as possible, be done with the knife.

Plants Under Glass.

Tuberose.—Bulbs should be potted as soon as they arrive, as they are so liable to damp if kept any time in bags. The small bulbets should be rubbed off before potting, for as the bulb is of no value after the first year, there is nothing gained by retaining these. After potting, place them under a stage, where they may be covered with a little loose hay, which will prevent the soil becoming dry. They should be brought on in batches as required, and as soon as growth commences keep them close to the glass, otherwise they are inclined to grow rather tall.

Winter-Flowering Carnations.—Early rooted cuttings which have been stopped will now require repotting, and should be placed in a cool house; indeed, they may be kept in this house all the season, provided one is assured of sufficient light and air. Many growers place them in frames or out of doors during the summer, chiefly in the South; but in the less congenial climate of the North I think this is a mistake. Stop all shoots that may run to bloom until June, which in the Northern Counties will be found to be late enough. Where one has an old house at command, one can grow a batch on the bench system, and, if not stopped after this date, they will give a fine supply of flowers in early November. These benches or boxes need not be more than 6 inches deep, and a sufficient length so that they can be moved when not in use.

Cœlogyne cristata.—In many cases this useful Orchid will have passed out of bloom, and will claim attention in removing some of the oldest of the pseudo-bulbs, and, in a few instances, repotting. This Orchid resents being disturbed at the roots, so that established plants should not be disturbed unless absolutely necessary. When growth commences, give liberal supplies of water, and later on liquid manure may be given, though only in a weak form.

Fruits Under Glass.

Vines.—As growth advances, a light sprinkling of some good Vine manure may be applied to the border from time to time. This will be readily taken up where the roots are near the surface. Fruit on pot Vines will be nearing the colouring stage, and a little more air may be admitted. Exercise great care in watering to prevent splitting. Vines coming into flower will require a mean temperature of 60° to 65°, allowing it to rise 15° with sun-heat. During this period the house should be kept somewhat drier during the day. Muscats must have a higher temperature when in bloom.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON VEGETABLES.

Onions.—For general use the main crop of Onions is distinguished from exhibition bulbs by the fact that they are grown entirely in the open. The month of March is the general time for sowing the seed. The ground will have been heavily manured and dug in the autumn, and left in as rough a state as possible for the wind and frost to pulverise the surface. Give the plot a dressing of wood-ashes, soot, lime and road grit if the natural soil is of a heavy, tenacious character. Choose a dry day to fork over the surface 6 inches deep, breaking the clods as the work proceeds. Allow it to settle down for a few days. Choose again a dry day to rake over the surface, removing the large stones and any rubbish. If the soil is light in character, tread the surface firmly over and rake again before sowing. Draw shallow drills with the corner of a hoe, sow the seed, and cover with a compost of wood-ashes, soot and old potting soil, with a handful of lime added. This addition, where the soil is heavy, is an inducement to quick growth. With the heels fill in the drills and rake evenly over. Exhibition Onions should be now well hardened off in cold frames, inducing the growth to be made as sturdy as possible. Prepare the site for planting, as the weather permits, by spreading soot, wood-ashes and lime over the surface, lightly forking the soil over in dry weather, and thus, as opportunity occurs, planting may proceed as quickly as possible. With a trowel take the plants out of the boxes with as large a ball of soil as possible attached to the roots. Allow 15 inches between the rows and from 1 foot to 14 inches from plant to plant.

Potatoes.—The main crop should now be got in as fast as possible. This will allow a long season of growth, which is an all-important point, especially if drought sets in in May or June, as is sometimes the case. Those tubers that root early will withstand drought so much better than those more recently planted. The ground will have been previously manured in the autumn and forked over preparatory to planting, which is an incentive to free growth. The best plan is to dig the ground and plant as digging proceeds, with the exception of the late batch, which may be planted in the field or between fruit trees, where the plough will aid planting. To grow good Potatoes, ample space is required to allow of free development of haulm and leaves. One, or at the most two shoots are ample to each tuber. Those sprouted in boxes can be regulated in this by rubbing off surplus sprouts. The midseason sorts should be 15 inches apart in rows 2 feet wide. The later sorts, of which The Factor is a type, need 20 inches of space, or a yard where the soil has been heavily manured. Where the soil is heavy,

cover the tubers with a compost of wood-ashes and old potting soil, with a small quantity of leaf-mould, as this will encourage quick root action and accelerate the growth. Where farm-yard manure is scarce, especially for the late varieties the following is a good substitute, sprinkled over the tubers in the trenches at planting-time per acre: 5cwt. of superphosphate (35 per cent.), 1½cwt. of sulphate of ammonia and 1cwt. of muriate of potash.

Broccoli and the various sorts of winter greens should now be sown in the open, including Brussels Sprouts for a late crop. Sow the seed thinly, covering with fine soil, with which is added a small quantity of soot. Cover the beds with netting to prevent birds of the linnet class devouring the tiny plants the moment they show through

the pots in a cold frame until the plants are well up; then, outside, plunged in ashes, is the best place. This method is much better than either putting in new plants from the open or sowing seed where the plants are to grow.

Parsley.—Plants raised from early sown seed in boxes should now be put out on the borders alongside paths, or in a well-prepared bed in the open if a quantity is required.

Leeks.—The plants raised under glass will now be hardening off in frames preparatory to planting out. The trenches should be prepared ready for their reception about the second week in April. They should be 2 feet deep and 18 inches wide. Break up the bottom of the trench at least 6 inches deep, to allow of free draining of water away from the roots. On the top of this add 4 inches of well-rotted manure. On the manure lay 3 inches of a prepared compost of old potting soil, leaf-mould and wood-ashes, adding to each bushel of the compost two double handfuls of fine bone-meal, well incorporating the whole together. E. MOLYNEUX.

Swanmore Park, Hants.

BOOKS.

An Artist in Garden Planning.*

—In the past architects have often been lacking in sympathy with the horticulturist, but it is now an accepted axiom that architect and gardener should have at least a knowledge of each other's business and endeavour to work in unison. In the case of Mr. Lutyens, Mr. Weaver writes: "One of the important happenings in the career of Mr. Lutyens was his early acquaintance with Miss Jekyll. Her great gift of gardening served as a stimulus to his appreciation, and led him to give the large attention to garden design which he has developed. It would be difficult to exaggerate the importance of her influence. Architects find in gardens a just sphere for design, but they cannot be expected to have a wide knowledge of horticulture. It is in the main to Miss Jekyll that we owe the rational blending of formal and the natural in garden design, which has harmonised the theories

of two contending and often acrimonious schools." The first of the important gardens designed by Mr. Lutyens for an existing house was made in 1893 at Chenies, Buckinghamshire, for Adeline Duchess of Bedford, of which gardens there are many splendid illustrations. The steady progress in the design and general picturesqueness, disclosed in the more recently constructed gardens illustrated in this book, reaches its zenith probably in those at Hestercombe (Chapter IX.). The superb illustrations of "The Great Plat" at Hestercombe, "The Main Terrace and Retaining Walls," "The Rill and Arbour in the Rose Garden,"

* "Houses and Gardens by E. L. Lutyens," described and criticised by Lawrence Weaver; 25s. net. Country Life Offices.



LILY POOL AND STEPS.

(From "House and Gardens, by E. L. Lutyens.")

the soil. As the plants grow, remove all weakly ones to ensure a more sturdy growth for those remaining, and keep the beds free from weeds for the same reason.

Vegetable Marrows should be sown in pots in a frame or gentle heat to get them forward. Plant the first batch under hand-lights or spare pit-lights, which are a protection from frost.

Asparagus should have attention where the beds were covered with short manure. This should be lightly forked over, raking the rough portions into the alleys, lightly digging this in, and here plant Cauliflowers from the inside-raised plants. Free the beds from weeds and give them a liberal dressing of common salt. Sow two seeds in a 3-inch pot for planting out next year, standing

"The Walled Pool Enclosure," "The West Water Garden," "The Dutch Garden" and "The Pergola" with its fine vista, not only show the continual advance in style, but reveal the wonderful resource and ingenuity displayed by their creator. To quote Mr. Weaver once again, "the Hestercombe gardens are a creation, wherein human imperfection of invention and of workmanship has been brought down to its minimum. They will long stand as a work of art to be admired and an example to be followed. They prove that an architect can be in unison with Nature and that a formal garden can form part of a landscape." Exigencies of space prevent our dealing at greater length with this splendid work, which contains no fewer than 400 pages of folio paper and nearly 600 superb illustrations, plans and diagrams, reproduced in the best *Country Life* manner.

My Garden in Spring.*—It falls to our lot from time to time to review books dealing with horticultural subjects, some good and some otherwise. For Mr. Bowles' book we have nothing but praise. It is entirely different from some which in recent years have been published, and which have been practically glorified catalogues written up to post-cards of some alpine plant "a penny plain and tuppence coloured," inasmuch as Mr. Bowles writes of plants and shrubs in his own garden, and he writes, too, so vividly and bewitchingly as to make one realise what a glorious garden he possesses, or, rather, that his father possesses, through having allowed his son to garden for him. The marvel is how the author, with the multitude of objects which engage his attention, and all good works, too, for the benefit of his fellow-man, finds time wherein to pay attention to horticultural matters and to write about them; but he does so with great success, as a perusal of his book will show readers. Mr. Bowles writes in a crisp, refreshing style, and there is a good deal of humour throughout. He would be a bold man who would dare to criticise Mr. Bowles in horticultural matters; but if the book has a fault, it is that in places it has a tendency to be rather too botanical, and especially in the chapter on Crocuses, which extends to thirty-two pages. Some of the differences in species are so minute as to remind us of water-marks, &c., in postage stamps. It is only fair to bear in mind that Mr. Bowles has been dubbed "Rex Crocorum," and perhaps he felt in writing the chapter that he must live up to the title conferred on him. He writes with such enthusiasm on Crocuses that he hopes to induce others to follow in his footsteps, as he no doubt will, especially as readers are told how to raise hybrids and how to treat them from seed-saving time. Mr. Bowles acknowledges gratefully the gifts of plants he has had made to him, and it is evident that he possesses the true gardening spirit of giving freely to others instead of selling all he can, as is the custom of some "amateur" gardeners. There is every promise of Myddelton House possessing a garden which will (if it does not now) rival Canon Ellacombe's; in fact, it is evident that it is stored with treasures, which thrive under intelligent cultivation. It is gratifying to see that Mr. Bowles is not an advocate for size alone in flowers, as his remarks on page 123 to the effect that he does not want to sit under the trumpet of a Daffodil during a shower and that a small man might feel nervous looking down some of the Daffodil trumpets, which bid fair to become

* "My Garden in Spring," by E. A. Bowles, M.A.; price 5s. net. London: Messrs. T. C. and E. C. Jack.

as large as gramophone mouthpieces, are most amusingly written. Mr. Bowles takes his readers through his garden and describes his treasures so realistically that one almost feels one's self in his company and sees the plants before one. The outcome of this book will be that the author will receive innumerable requests from readers to be allowed to see his garden; and while some enthusiasts will be welcomed by him, he may be plagued, as Dean Hole was, by some people who will persist in talking "about the newest baby or discussing the latest scandal." The chapter on Tulips is especially full of interest, but not a word is said in favour of *Tulipa mauriana*, one of the most brilliant and lasting of Tulips, and purchasable withal for 5s. a hundred. Van Tubergen rightly describes it as "a magnificent Tulip." We are loth to close the book, which every true gardener should read and read again. Like the author's garden, it is a thing of beauty and a joy for ever, and, considering how artistically it is illustrated and how well it is printed, the book should command a large sale.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment is desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLET PRINCESS OF WALES (York).—The smallness of the flowers, which is rather common this season in this variety, may be the result of three causes: 1. The plants may not have been vigorous when put in the frame, owing to want of manure in the soil where growing in the open. The smallness of the leaves rather bears this out; or the plants may have had an attack of red spider last summer, which would check their growth. 2. The growth of runners is all against size of bloom. These should be kept off the plants at all stages of their growth, inside and outside. 3. Have the plants suffered for want of water in the frames? If so, that would hinder size being obtained. The great point about growing Violets, double or single, lies in the preparation of the plants before placing them in the frame. Early in April break up into small pieces the old plants that have flowered, rejecting the central or worn-out portions. Transplant these in a fairly rich soil in an open site and a foot apart. Encourage free growth by supplying water as required, constantly stirring the soil about the plants. Remove all runners as fast as they appear, which will add strength to the plants. Lift with a good

ball of soil attached to the roots, and plant them in fairly rich soil in the frame early in September.

ROSE GARDEN.

MANURE FOR ROSES (R.).—Good farmyard manure may be applied to Rose-beds now, or a mixture of 3lb. of superphosphate and 1lb. of nitrate or sulphate of ammonia may be applied per rod at an early date. The specimen sent for determination is the Cornel, or Cornelian Cherry (*Cornus Mas*).

ROSE HELENE (D. C. S.).—This is one of the multiflora Roses, a seedling of *Crimson Rambler*, producing fine trusses of flowers of a delicate rosy pink colour. You should peg down last year's growths, those that are well ripened; then, when they have blossomed, cut them away so as to encourage other growths for pegging down next year. The pest is probably the larvæ of the daddy-long-legs. Give the soil a dressing of Kleenzoll, an excellent soil insecticide, to be obtained of Messrs. W. Voss and Co., Carlton Works, Millwall, London.

PRUNING A PENZANCE BRIAR HEDGE (R. A. S.).—As the hedge was planted in November last, we should advise you, if the plants were fairly bushy, to cut down close to the ground one or two of the growths, and the remainder retain almost full length. This will prevent what you fear—a thinness at the base. Where the growths retained are pliant enough, some could be spread out a little out of the perpendicular, which would have the tendency to produce basal growths without reducing the height of the hedge. In order to do this, a few unobtrusive stakes could be inserted. In subsequent years cut down one or two growths annually. If you desire a tall hedge, a few stout posts should be inserted and some wires attached so that you can secure the growths into something like order and, at the same time, enable you to spread them out for the object previously mentioned. As regards pruning weeping *wichuraiana* Roses the first season, it is best to leave them almost intact, excepting to remove unripe ends. Open out the growths upon a frame of wire or Bamboo. After the first blossoming you should then cut away several of the growths quite close to their base; the result of so doing will be to encourage new growths, which will be for next year's blossoming. Do not defer cutting out the growths later than the end of July.

MISCELLANEOUS.

LEAF-HOPPERS (Sussex).—The little insects on your plants are leaf-hoppers, and often troublesome to a variety of plants. They are very tenacious of life, and difficult to eradicate when once they have obtained a footing. Spraying with a nicotine wash in the evening would, no doubt, kill a large number, but one spraying alone would not be likely to be effective. The best method, however, would be fumigating with one of the excellent fumigants now to be obtained, and a repetition of the fumigation within two or three days, and possibly a third, for even fumigation will fail to kill eggs of such pests.

APPLYING LIME AND CARBONATE OF LIME (G. B. P.).—Ground quick (or unslaked) lime may be used in the autumn, but it would be rather dangerous to use it now, especially so if the Rose trees are already planted; otherwise it is the best form in which to apply lime to a heavy soil. Carbonate of lime may, however, be used without fear, and will have a beneficial effect. Purchase it in the form of ground chalk as finely ground as you can get it, or as broken-up oyster-shells. "Ground garden lime" is a term which conveys no distinct meaning. So long as the stable manure is immediately forked in, it may be added, although lime has been applied. The advice not to add the two together is given because caustic lime, brought in contact with ammonia-containing substances, such as stable manure, leads to the giving off of ammonia into the air. If the manure is buried, any ammonia given off would be absorbed by the earth. If stable manure can be procured, we advise you to use that, for artificial manures never have quite the same beneficial effect upon the physical condition of the soil as does stable manure.

LABOUR FOR FORTY-ACRE ESTATE (E. D.).—The amount of labour required would of necessity vary according to the class of soil, the nature of the land—flat or otherwise—the acreage set apart for flower gardening, and other things. The amount of labour, too, cannot be regulated by the size of an estate; it is what is demanded from it that swallows up labour most of all. A kitchen garden of nine or ten acres of light soil on level ground would require about five men, and of heavy soil about seven. The degree of tidiness required is also a factor to be reckoned with. In all the circumstances, so far as we know them, seeing only "reasonable order" is expected and no glass or bedding-out arrangements are mentioned, twenty-five men might prove sufficient. We give this opinion, however, with some diffidence; and only after a personal knowledge of the estate and what is demanded of it could even an approximately correct answer be given. For the tree stumps you cannot do better than use *wichuraiana* Roses if the stumps are large, or, if not, the smaller-growing *Ivies* and *Clematis Jackmannii* or *C. Viticella* in variety. *Azara microphylla*, *Euonymus radicans variegata* and *Cotoneaster horizontalis* would also prove serviceable.

NAMES OF PLANTS.—*Scottish Gardener.*—The Violet is *Amiral Avellan*, exceptionally well grown.—*Pigeon House.*—*Sisyrinchium grandiflorum* (Spring Bell).—*E. M. D., Kent.*—*Cyclamen persicum flabratum*.—*Mrs. G.*—*Tulipa clusiana* (Lady Tulip).—*R. O. B.*—1, *Coronilla glauca*; 2, *Escallonia macrantha*; 3, *Berberis Darwinii*; 4, *Leucojum pulchellum*; 5, cannot name without flowers; 6, *Berberis stenophylla*.

NAME OF FRUIT.—*G. W. Jenkins.*—*Annie Elizabeth*.

THE GARDEN.

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APRIL 4, 1914.

NOTES OF THE WEEK.

Transplanting Pampas Grass.—Anyone desirous of transplanting or dividing this noble ornamental will find the present time suitable. It will be found advisable to trim off the leaves first, as this makes the dividing of the clump much easier. Some people set fire to the old leaves, and this is, perhaps, the simplest method, but the fire must be kept under so that the plant is not damaged. The burnt appearance will soon be hidden by new growth.

Transplanting or Dividing Hardy Ferns.—Now that the period of rest for hardy Ferns is passing and the roots are getting active for the new growth, it is time to take in hand any transplanting or dividing that may be required. The present state of the roots, in the absence of tender growth, is easily damaged and enables the plants to establish themselves after removal. A good mulch of decayed manure or leaves after planting done will be very beneficial.

Top-Dressing and Planting Asparagus.—Established beds should be gone over and dressed with a mixture of loam and decayed manure, forking a little of the same material into the alleys. Where a new plantation is intended to be made, the present is a good time for this work. In ground where it is a good plan to make a sowing about this time, which in many cases subsequently does better than if one or two year old crowns were planted.

Rose Conference at Biarritz.—The eighteenth annual conference of the French Rose Growers' Society will be held at Biarritz from May 29 to June 1 in conjunction with the Société d'Acclimatation du Golfe de Gascogne. The programme is an interesting one, for, besides the ordinary meetings of the conference, there will be receptions, dinners and other festivities, the chief of which are excursions to King Alfonso's Palace of Miramar at San Sebastian; to Puentarrabia, a quaint old town close by; a mountain excursion to the Grotto of the Pas de Roland; and to Cambo, the birthplace of M. E. Rostand.

An Easily Grown Rock Plant.—*Draba aizoon* is now flowering freely, the small tufts being almost hidden by the golden flowers. It is to be regretted that such an easily grown and readily increased plant is not seen more often in the crevices of rockwork or similar places, for which it and the well-known British species, *D. aizoides*, are especially suited. Both kinds seed freely, and, if the seeds are sown at once, plants are quickly produced large enough to handle for inserting in old walls or niches in the rockery, where they make a bright early display.

Primula denticulata and Its Varieties.—In many gardens these Primulas are flowering to perfection. They are among the earliest of the

one of the curious and not unlovely plants that may be grown in garden or woodland where it is fairly moist and shaded. It usually grows on the roots of Willows and Poplars, but whether it is confined to these we cannot say, and at this season it pushes to the surface of the ground a great number of flowering shoots, sometimes covering from 2 feet to 3 feet square. These are a mass of whitish scales at first, from which erect flowers with a purple corolla, $1\frac{1}{2}$ inches long, are produced. These are not easily compared with other flowers. The upper lip forms a kind of cowl over the stamens, and the lower one a projecting bracket, upon which insects may alight to enter the flower. Large masses that are flowering in the Cambridge Botanic Garden now are of considerable interest to visitors.

The Lesser Periwinkle.—This plant, *Vinca minor*, is of a most accommodating nature, for it will succeed under very varied conditions. In the first place, it is at home clothing a sunny bank, in which position it is just now flowering freely; next, it is well suited for carpeting the ground underneath trees; and, lastly, very few evergreens will hold their own in the smoky districts of London as well as this does. It will succeed there in situations where the larger Periwinkle (*Vinca major*) will die out. When in a



PRIMULA DENTICULATA ALBA, A CHARMING VARIETY THAT FLOWERS IN EARLY SPRING.

hardy Primulas to open, and the heads of lilac and white flowers often show colour as early as February. It is in the early days of April when they are seen at their best, and they are particularly effective when planted in breadths in short grass about the alpine garden. These Primulas like moist positions, but the soil must be well drained, for nothing is more certain to bring about failure than stagnant water about the roots. The best varieties of *P. denticulata* are alba and cashmeriana, the latter having violet flowers with yellow eyes. *P. denticulata* is a native of the Himalayas, rather like *P. capitata* in habit, but the flowers are larger and different in colour.

An Interesting Parasite.—Although *Lithraea clandestina* is a parasite, it claims attention as

healthy state, the foliage of the lesser Periwinkle is of a rich green colour, and the blue flowers nestling among it have a very pretty effect.

Freesia Contrast.—A bunch of this in a vase is very bright and light looking. The three smaller segments of the perianth have a great deal of deep orange marking upon them; in fact, the centre and smallest one of the three is almost all orange. The rest of the flower is ivory white. A potful in a greenhouse makes a good show. Like most of these hybrids, the individual plants branch much more than the old *F. refracta* alba, and Contrast is no exception to the rule. It increases freely, so, although it is expensive to buy in any quantity at present, a small stock will soon provide plenty for cutting and for pots.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Viola Jackanapes.—In your issue dated March 28 a correspondent, Mr. T. Smith, says he is unable to obtain *Viola Jackanapes*. This variety is offered by Messrs. Forbes of Hawick in their 1913 catalogue at 2s. 6d. per dozen or 15s. per hundred, so I expect they still catalogue it, and if your correspondent is anxious to get it, he should apply to this firm.—C. M. BAILEY.

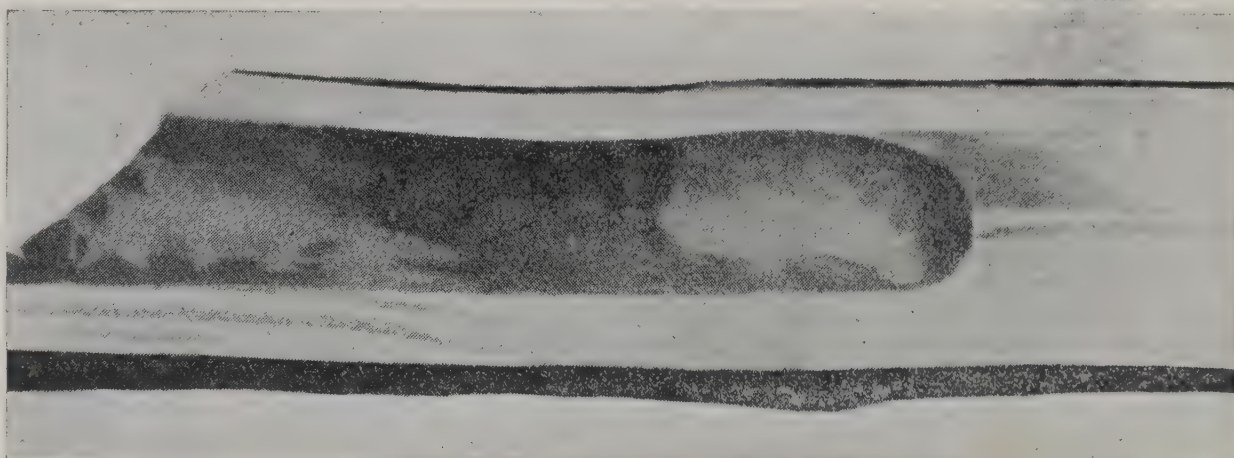
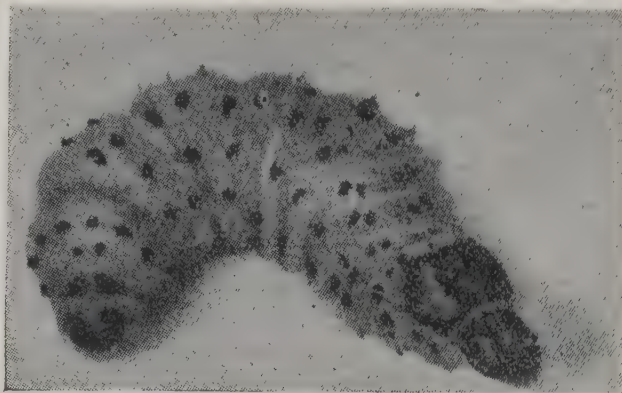
Plums from the Cape.—The article in your issue of March 14, page 135, on Japanese or Cape Plums was most interesting, and while in one part of the article Mr. Bunyard rather suggests that to grow these Plums (as from experiments already made in this country out of doors) would be a failure, yet at the end of his article he as much as says that they would be a success on walls. I am writing, therefore, to enquire whether any readers of *THE GARDEN* have ever succeeded with these Plums on walls out of doors, and whether the crops have been worth the space on the walls?—W. F. M. COPELAND.

Erica carnea on Limestone Soil.—In your issue of March 14 you ask for further information as to the behaviour of *Erica carnea* in limestone soil. Some years ago I planted it and its white variety on a small limestone rockery, the soil of which consists almost entirely of old mortar rubbish. I found that it thrived far too well for the space accorded it, and I was obliged to remove it to make room for plants of less vigorous growth. It is a pity that any of your readers should avoid growing this beautiful little shrub (in my opinion the best of the *Ericas*) owing to the mistaken notion that it shares with others of its tribe a dislike to lime in the soil.—NORMAN RUSHWORTH, *Beechfield, Walton-on-Thames*.

Lime for Lawns.—A correspondent asks in your issue of March 21 what effect lime has upon lawns and the amount to be applied. I would say that nearly all old lawns would be benefited by a dressing of lime, especially if the turf were mossy. Old lawns are often inclined to be sour, and, of course, it is well known that lime corrects the acidity of the soil. Again, where manures are used containing a large proportion of nitrogen, the soil will become surcharged with it and the turf will suffer. A dressing of lime will set free the ammonia, and thus turn what was harmful into useful plant food. Lime, however, should not be used too often, or it will impoverish the soil. I should say that in cases where the turf was regularly fed with artificial manure, once in three or four years would be sufficient. In cases where no manure was given, a dressing once in six years would be often enough. Slaked lime, finely ground, should be used, and it should be evenly spread on a still day at the rate of 3oz. per square yard. Autumn is the best time to apply it, so that the winter rains may put it all out of the way before mowing commences in the spring.—J. DUNCAN PEARSON, *Lowdham, Notts*.

Road Sand: A Caution.—At one time the sweepings of the roads were looked upon as of great service to the plant cultivator, being not only spread upon the land, but also freely mixed with potting soils. Now, with the increased use of chemicals on the roads and the fact that motors have to a great extent taken the place of horses, it is frequently dangerous to use road sweepings in growing plants of any kind.—H. P.

The Leopard Moth.—Six weeks ago I was pruning an orchard of trees which are six years old. As I was taking off some suckers from the scion where it was grafted, I discovered a hole eaten in the scion. Naturally, I examined it carefully, as the tree appeared to be in good health. I cut the tree down and found the hole was eaten up the main stem. I discovered a very large grub, which is, at the present time, embedded in the Apple stem I have enclosed. You will see how it is discharging the wood it is living on.—WILLIAM GAIGER, *The College*



SECTION OF APPLE SHOOT BORED BY LARVÆ OF THE LEOPARD MOTH. THE GRUB AND SHOOT HAVE BEEN SLIGHTLY ENLARGED.

Gardens, Studley Castle, Warwickshire. [The grub sent by Mr. Gaiger, and illustrated herewith, is that of the leopard moth, *Zeuzera Aesculi*. This is a rather large moth, with wings of white ground colour, freely spotted with roundish blue-black dots. These moths are not very common, though widely distributed over this country. The grubs may be killed by thrusting a stout wire up the gallery that has been formed. Branches that have been attacked often live for years and bear good crops of fruit.—ED.]

Tall Antirrhinums.—It is obvious that "G. L. J.," whose note appears on page 142, issue March 21, has never seen really tall Snapdragons, else the comparison to monstrosities would not have been made. In my opinion they are the grandest of all Snapdragons, and almost rival the Hollyhock in stately beauty. The only varieties for which I entertain a feeling bordering on contempt are those of the dwarf section, yet many people grow these to the exclu-

sion of all others. I keep in mind the French saying that each one has a right to satisfy his own tastes, and allow for personal proclivities, even for those of "G. L. J.," and trust in the future he or she may be able to increase by twofold at least the period of the season of bloom, which is coincident to the strength of the plant, including increase of stature. In reply to "F. R. H. S.," I grew Cottage Maid some years ago, and found the name represented eleven colour variations. It has probably improved since.—R. P. BROTHERSTON.

Myosotidium nobile.—It may interest your correspondent Mr. Brotherston, whose note appears on page 142, March 21 issue, to know that the New Zealand Forget-me-not is quite a success in the open in South-West Scotland. The plants flowered and set seed freely last season; but, not having tested the seed, I cannot answer regarding the fertility of it. It is said that in its native isle this plant is to be found growing on damp sand by the seaside; therefore it is advisable, when preparing a site for it, to take out a hole about two feet square and fill it with sea sand. Like many other thick, fleshy-rooted plants, this is most impatient of root disturbance. A fine illustration of this appears here in a plant that was transplanted two years ago and given no sea sand; it seems to have made no growth since then. Some writers describe this as a beautiful blue, but the flowers here do not warrant that description, being very pale. The reason may be that this is a variable plant, in that there may be various shades of blue. Apart from its flowers, it is a highly ornamental plant for the garden during the spring and

summer, with its large, heart-shaped leaves and curious seed-heads. The plants here are growing in a cool, damp position on the north side of a dense Beech hedge, which seems to suit them admirably. At the time of writing (March 21) there are many flower-heads appearing, which were exposed to the following frost without in any way damaging either flower-buds or foliage: March 9, 15°; March 10, 8° (thermometer on the grass). I

have no doubt it would prove sufficiently hardy in many colder districts than this is if it was given the protection of a little dry hay or Bracken and a bell-glass over the crowns during severe weather.—R. FINDLAY, *The Gardens, Logan, Stranraer*.

—When in Cornwall last week I called at the beautifully situated gardens of Enys, and, seeing *Myosotidium nobile* in such grand condition, I asked Mr. Frost, the gardener, to give me particulars of treatment. He stated: "As you see, the New Zealand Forget-me-not grows very freely here under a north wall, in peat and sand, with a dressing of seaweed in early winter. It flowers grandly, and produces seed in more or less quantity, according to the summer, from self-fertilised flowers. The seeds ripen in August, and germinate quickly in cold frames if sown as soon as gathered. The young plants have been uninjured by 10° of frost, and the plants are evergreen."—NORTH SOMERSET.

Triteleia uniflora as a Pot Plant.—After the very interesting little note and illustration of *Triteleia uniflora* in your issue of March 14, I am wondering if many of your readers try it as a pot plant for flowering early in the year, with a little heat. I have grown it as such for about twelve years, and find it very useful for furnishing the front of the stages, also for standing around Palms and vases in the house, as the leaves droop over the sides and look very pretty. I generally use 4-inch pots, with about seven or eight bulbs in each; just pot them in the autumn and stand them in a cold frame till the growths are about an inch and a half long, and then take them straight into the house with a temperature of about 60°. They do not seem to mind a little forcing. I have found they can be ripened off in their pots and potted up again in the autumn.—E. BARBER, *The Gardens, Renton Hall, Surbiton.*

Lachenalias as Room Plants.—I have read with much interest the note in THE GARDEN, page 142, March 21 issue, by the Rev. J. Jacob on the culture of *Lachenalia Nelsonii* as a room plant. I agree with him. Few take the trouble to grow them well, but I am sure any gardener who has not given them a trial would find them most useful plants during February and March for room and table decoration. I have grown these pretty Cape Cowslips, as they are called, for forty years. At the present time I have about two dozen pots of *L. Nelsonii* in flower. They are equally good in baskets, planted in moss and soil, and look very dainty when suspended from the roof of a greenhouse, but they must be well supplied with water. I think the reason why so many do not succeed in growing them well is that they do not pay enough attention to ripening off the bulbs, which I consider is so necessary for successful culture.—W. DRIVER, *Stonehouse, Gloucestershire.*

Cold Storage for Cut Roses.—A correspondent asks for information about cold storage for exhibition Roses. This is adopted, I believe, by some of the American florists, and undoubtedly there is much to be said in its favour from a florist's point of view. I should imagine, however, that it would scarcely work beneficially for the exhibitor, because as a rule he has to contend with theretchedly ventilated canvas tents that are so owing to the Rose. I think its success would much depend upon the time of year and the atmosphere the flowers were placed in after leaving the cold storage. I remember, many years ago, that some cut specimens of new Roses were sent over from the United States in cold storage, and they were exhibited in London as fresh-looking as though just cut. But this was in the winter-time. I can see the advantage to a Rose exhibitor of using cold storage if the blooms would not show wither after being taken out, which I much prefer, as some Roses might be taken from one show to another. Besides, we could retard a bloom to a certain show day. If this is ever adopted it will make a considerable difference to our exhibitions. Perhaps some of our amateur enthusiasts will experiment and give in these columns their results.—DANECROFT.

Perpetual-flowering Carnations for Bedding.—The very beautiful beds of these charming flowers which are sometimes seen leads one to hope that here long they will figure very largely in important schemes of bedding. At present there are only two or three varieties which are used to a great extent for bedding purposes; but there is no doubt that these will be considerably

augmented. Last year I used Mrs. Burnett and Britannia. The former was planted in a bed by itself, over a groundwork of Sweet Alyssum. Part of the plants used had already done good service by flowering all through the winter months. The plants were partly cut down in March and placed in a light structure till the beginning of May, when they were subjected to a course of hardening off, together with some smaller plants which were struck the previous autumn for the purpose of bedding. Towards the end of June they commenced flowering, and continued to flower profusely till frost appeared late in the autumn. The variety Britannia was planted in a mixed bed of border kinds, and if any evidence was needed to convince one that the perpetual kinds will one day reign supreme outdoors, it was to be found here. Apart from the perpetual nature of its flowering, the colour and form of the flowers of Britannia were equal to any of the border kinds. I have not tried any other varieties outdoors, but I presume that the drawback with most is that their flowers will not stand the vagaries of our climate. But no doubt the Carnation hybridists will before long present us with varieties which will overcome this difficulty.—E. HARRISS, *Lockinge.*

Aster Disease.—I can fully substantiate the remarks of "F. M. S." on the advisability of treating Asters as hardy annuals. For many years I have made it a practice to sow Asters in the open ground at the latter end of April or the first week in May, although, owing to insufficiency of space, I have not been able to allow all to stand where sown. There is no questioning the fact that Asters never do so well as when grown without a check; and in transplanting at a late stage the plants certainly get a severe check, especially if dry weather follows planting. The practice of sowing in the open is the recognised system in the United States of America; and nowhere in the world are Asters grown on so gigantic a scale and in such phenomenally good form as in America. Fully ten years ago I was in the habit of sowing my seed in the open, and it is astonishing to me why so many are addicted to sow Asters under glass in heat. During my connection with a Midland firm we always made trial sowings of annuals in the open, and I have never seen better Ten-week Stocks than these late April sowings produced. I do not agree with "F. M. S.'s" policy of non-thinning. If he handled such varieties of Asters as Peerless Pink, Violet King and the various late branching forms, and desired to see them run to their 2½ feet to 3 feet limit, with flowers up to 7 inches, he would find it necessary to give a full foot of space. Regarding the immunity from disease of open-air sown plants, this is largely, if not entirely, due to the fact that the seedlings do not get leggy in their early stage. "F. M. S.," by avoiding transplanting, entirely guards against the possibility of the plants being set too deeply. On no account must any foliage be allowed to touch the soil. The lower leaves, if not clear of the ground, should be removed, otherwise these commence to decay and stem-rot follows. Plenty of lime in the ground is essential.—T. W., *Kent.*

FORTHCOMING EVENTS.

April 6.—United Horticultural Benefit and Provident Society's Committee Meeting.

April 7.—Royal Horticultural Society's Exhibition. Lecture at 3 p.m. on "The Cultivation of Amaryllis." Scottish Horticultural Association's Meeting.

SEASONABLE NOTES ON AURICULAS.

THE month of April will prove whether the grower has been successful or otherwise. A few of the alpine varieties will begin to open their flowers, and by the end of the month a fine display will be the rule in the majority of collections. Few plants can equal Auriculas for richness of colour, and they are still among the choicest of flowers that bloom at this season.

Watering.—The plants should be looked over daily for watering purposes, as they are now most active, and the weather will also cause them to dry more quickly than hitherto. Dryness at the root must be avoided, or the flowers will be ruined. A little more attention will be necessary in regard to shading, and the blooms must be protected by a thin blind from all strong sunlight, although, when the flowers commence to expand, the early morning sun will be of considerable benefit. Ample ventilation should be given and the frames kept quite cool to prolong the life of the spikes.

Preparing Plants for Exhibition.—The following remarks are not intended for the exclusive use of exhibitors, and the reader will notice that some of the instructions given are just as necessary for the amateur who keeps his plants at home as for the man who exhibits. In most instances a neat little green stick should be placed to each stem, and this is best done in the early stages of growth, before the stalk is bent over by the weight of the flowers, and the pips, as they are called by the florists, will in some cases require adjusting, so as to show off the truss to the greatest advantage.

Where the trusses are very dense, it will be necessary to thin the buds, removing two or three at a time with a pair of tweezers or small scissors. With the alpine a lot of thinning is not carried out, but the show varieties are subjected to more severe treatment, especially the greens, greys and whites. If the exhibitor can secure four or five good flowers upon a stem, he is usually satisfied. They must not be crowded, and each flower should be as perfect as possible.

The selfs are also thinned, but a few more flowers can be allowed to develop if the plant is strong. The grower must use discretion in these matters, and if he allows sufficient space to prevent undue overcrowding, a fine truss of blooms will be the result. See that the pots are clean, a clearly written label in each pot (or the reporter may overlook your exhibit), and a layer of fresh moss around each plant. Be very careful in handling the plants, so as not to bruise the flowers or disturb the farina on the leaves and stems.

Saving Seed.—Where the beginner desires to save some seed with the object of securing a few good varieties, it will be necessary for him to work on some such lines as given below. With the show varieties a green edge should be cross-fertilised with another green-edged kind, a grey edge should be mated with another grey edge, and a white edge with a white edge. In the selfs the colours should be kept together as far as possible, and with alpine a gold-centred variety can be pollinated with another gold-centred kind, and so on. Having selected a flower to be fertilised, the anthers must be removed in the early stages before the pollen is ripe, and if the plant is held in a downward position, they will readily fall to the ground.

T. W. BRISCOE

DAFFODIL NOTES.

The Season.—Winter has paid his annual visit to the British Isles this year in March instead of January. As George Stephenson said of the hypothetical cow in front of a railway train, it is "bad" for Daffodils when this icy, boisterous visitor catches them, as it were, off their guard. They do not like it. They feel that the Clerk of the Weather, who is supposed to arrange all these visits, has "taken them in." They cannot do much to show their resentment, so they just sulk and we get small flowers and short stems. I ruminate thus to let our friends elsewhere know what sort of a beginning we have had with our outdoor season. And yet the next Royal Horticultural Society's Tuesday meeting comes along, and there, at any rate, there are few signs of the unwelcome visitor.

Flowers at the Royal Horticultural Society's Show on March 24.—"Wilson is exhibiting" has to Daffodil persons much the same effect as "Gladstone is up" used to have on members of the House of Commons. They are seldom, if ever, disappointed, for a Wilson exhibit is always full of good new things. It was no exception on March 24. Perhaps the distinguishing feature was the fine new series of the Schoot type of Poetaz that have been raised by Mr. P. D. Williams of St. Keverne, Cornwall. He is our principal English raiser of this bunch-flowered class. His Rubellite and Lucasta are both of them remarkable developments, in that they give us such red eyes with such fine white perianths. Rubellite I described last year, and it is also in the novelty list of the 1913 Year Book. The solid red eye, relieved in the very centre by the green top of the perianth tube, resting on a pure white perianth about two and a-half inches in diameter, is very delightful. This pleasing impression is further enhanced by the three or four large blooms being so arranged on the stem that they do not jostle and put one another too much out of shape. Lucasta is similar, but the eye is a trifle smaller and more suffused than solid; that is to say, its centre is of a much more orange shade than the circumference. At a little distance away I almost thought it looked "rimmed." Personally, I think I admired it more than Rubellite. It depends how far one leans to the all red. Ossian was the only other one that was named. It features the Polyanthus Narcissus more than the others, and in my opinion was not to be compared to the other two, although its orange-toned large eye was effective. There were several others under number. Some I did not like and some I did. In the latter category was a distinctly good all yellow, which I think will develop into

something useful, but I cannot remember if it had a long enough stalk. The other outstanding feature of the group was an early edition of the now well-known Buttercup, but two weeks earlier to bloom and of a much deeper shade of yellow, following in this its mother King Alfred, as Buttercup does Emperor. The committee gave it a garden and a cutting award. As a show flower it does not come up to the older variety. Its measurements are $3\frac{1}{4}$ inches diameter of the perianth, $1\frac{1}{4}$ inches length of cup, and 1 inch width at top. The "loving" eye, the eye of the man who observes and asks and thinks, must

yellow perianth. Size, 4 inches by five-eighths of an inch by three-quarters of an inch. Both Beryl and Bernardino were shown in superlative condition. An exhibit of a totally different style was that put up by Messrs. Bath of Wisbech. Roughly speaking, two-thirds consisted of well-grown Tulips in bowls, and one-third of a select, fresh-looking little lot of rather choice Daffodils. Flame occupied the central position, and on account of the way in which my good friend Mr. Bennett-Poë cracked it up a fortnight before, I had a specially good look at it. To all intents and purposes it is an enlarged and

intensified Barrii conspicuus. Mr. Leak told me it was not doing it justice to form an opinion from the blooms that I saw. It would be on view again before the end of the season. Hence I wait, as my readers must also, before I make a final pronouncement. Eastern Maid was the one absolutely new variety to be seen there. I know nothing of its parentage, but its general shape betokens a touch of cyclamineus in its composition. It has the thrown-back petals which are so suggestive. These are wide and pointed, and of a delicate greenish primrose shade, which is very taking. The cup is narrowish and long, pale yellow in colour. It was presented to the committee, who in return presented it with an award of merit as a show bloom. I like it very much. It would ornament any "fifty." I am told there is a small stock of it, so perchance it may be "buyable" before long. Of the exhibits of Messrs. Barr, Mr. Bourne, and Messrs. Cartwright and Goodwin I will write next week.

Registration of Names.—The new Classification List is now out, and can be obtained for a shilling from the Royal Horticultural Society, Vincent Square, Westminster. Mr. C. H. Curtis, the secretary of the Daffodil committee, is going to put up a list of all the fresh names sent in for registration at the fortnightly meetings of the committee. The first one was put up on March 24, and contained sixteen. This is an excellent idea, for which we owe our secretary many thanks.

It is provoking to fix on a name and find it taken. But as the number of seedlings becomes greater and greater, we all find it more difficult to avoid pitfalls; hence the utility of this publicity.

JOSEPH JACOB.

[In our next issue the Rev. Joseph Jacob will continue his observations on the Daffodils shown at the Royal Horticultural Society's show on March 24, while brief descriptive notes on the four Narcissi to gain awards appear on page 172. The illustration of Narcissus Rubellite is reproduced by the courtesy of Mr. P. D. Williams of St. Keverne, Cornwall.—ED.]



NARCISSUS RUBELLITE OF THE POETAZ SECTION. THE FLOWERS ARE PURE WHITE WITH A DEEP RED EYE.

have observed with a considerable amount of surprise No. 153, quite a nice bicolor, with a green water-mark down the middle of each petal, like the yellow down the centre of the segments of many Tulips. Not a Conqueror certainly, but withal something to have in one's garden among the early yellows and the early red cups. These are becoming fairly common, but bicolors are still rare. Tita, which was another fine thing in this collection, is one of the above-named early red cups, and of so much value for the garden and cutting that the committee gave it an award. It has a suffused cup and a good

SEASONABLE NOTES ON PEACHES & NECTARINES.

Trees Under Glass.—Although the trees are hardy when allowed to grow naturally on open walls in this country, the forced growth of the trees under glass must not be checked by careless ventilation during frosty nights and while east winds prevail. If the ventilation of the structure is perfect, it is wonderful how well these fruit trees thrive in an unheated house. In heated houses the growth of the trees is now quite forward. On every day that promises to be bright and sunny, the fires must be stopped about nine o'clock in the morning. A little top ventilation will be beneficial, but no front ventilation should be given at present. The borders and paths ought to be damped in the early part of the day and again after noon, the ventilators being closed between three and four o'clock. The young fruits will be quite prominent and the first thinning must be done. This will consist of the removal of ill-placed and small fruits; the largest ones on the fore part of each branch must be left now, to be reduced in number at a later date. The young shoots are several inches long, and the final thinning of them must not be delayed any longer. On a shoot from 18 inches to 2 feet in length, three young ones should be left, namely, one at the point, one near the centre, and one quite at the base. On shorter branches leave two young shoots, namely, one at the point and one at the base. Syringe daily; twice on fine days—once early in the day and again when the house is closed. The thorough wetting of the leaves keeps them free from red-spider and thrip, and, furthermore, promotes a healthy growth. As a further preventive of red spider, scatter a little soot on the border at syringing time in the afternoon. This should be done about once a week. The ammonia arising from the soot is beneficial to the Peaches, and prevents the spread of red spider.

Trees in the Unheated House.—These will require the same treatment as those in heated structures, except in the matter of damping and syringing. Less water must be sprayed on the path and border, and only on very fine days must there be an afternoon syringing as yet. The gradual disbudding of shoots and fruits must be done while both are small.

Trees Trained on Open Walls.—The blossom must be protected from frosts. Pull down the scrim, tiffany or nets in the daytime if heavy rains prevail and there seems to be danger from frost at night. Frost does more damage when the flowers are wet than when they are quite dry. It is beneficial to continue the protection of the tiny fruits for about ten days. **GEORGE GARNER.**

HARDY SHRUBS FOR THE GREENHOUSE.

IN the depth of winter a few of our hardy shrubs, such as the *Laurustinus*, *Jasminum nudiflorum*, *Erica carnea*, &c., with such berry-bearers as *Skimmias*, *Aucubas* and *Pernettyas*, contribute their share to the embellishment of the greenhouse. It is, however, in the early months of the year that this structure depends largely for its show of blossoms upon hardy shrubs that have been forced prematurely into bloom. This practice of forcing shrubs is now greatly on the increase, and immense numbers are grown specially for the purpose.



A BUSH OF WHITE LILAC MARIE LEGRAYE. THIS IS A SPLENDID VARIETY FOR FORCING.

Of the different subjects, perhaps the most popular of all are the Azaleas, of which there is now a great variety available. The compact-growing *Azalea mollis*, which flowers in great profusion, has for the most part blossoms of some shade of terra-cotta; but there are some improved forms, notably the rich yellow *Anthony Koster*. The Ghent Azaleas are also amenable to forcing, though they are not so generally employed as *A. mollis*. In the Ghent kinds the flowers are, as a rule, smaller, but the range in colour is more extensive than in *A. mollis*, while they have also a more pronounced perfume.

Next to these may be mentioned their near allies, the *Rhododendrons*, which are very showy under glass. Many of them, however, do not force readily, as, if kept too warm, the flowers will

grow blind. Good kinds for the purpose are *R. arboreum wellsianum*, *R. Blanche Superbe*, *R. caucasicum album* (Cunningham's White), *R. c. pictum*, *R. mirabile*, the different forms of *R. nobleanum* and *R. Prince Camille de Rohan*. Besides these, the small-growing kinds, such as *R. præcox*, *R. Rosy Bell* and *R. Early Gem*, are very readily forced.

Many rosaceous plants contribute largely to the floral display in our shrubberies in early spring, and a great many of them will do well under glass. Among them may be mentioned the double-flowered Peaches and Cherries, with several of the smaller-growing forms of *Pyrus*. Of all plants belonging to the order, there are no greater favourites for forcing than the double forms of

Prunus japonica and *P. triloba*, both of which are grown for the purpose in very large numbers. *Kerria japonica flore plena*, with its rich golden blossoms, like little Roses, must not be passed over in any selection, while some of the *Spiræas* claim to be included, the best being *S. arguta*, *S. confusa* and *S. prunifolia flore plena*, this last being remarkable for its tiny double, rosette-like blossoms. Magnolias, too, are very striking, not only such as *M. Lennéi*, with its large, chalice-like blossoms, but some of the smaller kinds, notably the charming little *M. stellata*, so recently illustrated in *THE GARDEN*.

Lilacs are, and have been for many years, forced in large quantities. Immense numbers of sturdy little bushes bristling with flower-buds are sent to this country from the Continent every year. The single white *Marie Legraye* is the most popular of all. Another that is largely grown is *Charles X*. Of double-flowered kinds, *Mme. Lemoine*, white, is grown more than any other.

Deutzia gracilis has for the last fifty years or more occupied a foremost place among shrubs for forcing, and at the present time its position is as secure as ever. Of the newer kinds, the larger-growing *D. Lemoinei* forms a very suitable companion to it.

A subject that has come largely to the front within

recent years for flowering under glass is *Wistaria sinensis*, as when this is grown in standard form the long, pendulous racemes of mauve-coloured blossoms form a very striking and distinct feature among its associates.

Apart from the different subjects enumerated above, there are many others, all of which are available for the same purpose. Among them may be mentioned the Brooms, *Forsythia suspensa*, *Weigelas*, *Staphylea colchica*, the Guelder Rose and its Japanese form, with the orange-coloured *Berberis Darwinii*. A valuable shrub for greenhouse decoration, though it cannot be had in bloom early, is *Hydrangea paniculata grandiflora*, whose massive, pyramidal-shaped heads of cream-coloured flowers are very ornamental. **H. P.**

ANNUALS IN THE ROCK GARDEN.

AS a general rule, the rock garden is pre-supposed to be a type of herbaceous border where only perennial plants may be grown, but amateur readers must realise that there are many annual flowering plants quite amenable to successful culture among the rocks and stones; indeed, the introduction of a nice blending of colours by this means adds increased charm to the place, and without much trouble leads to a greatly enhanced appearance at certain times of the year. Where bulbous plants that bloom in spring are features of the place, annuals may be made to produce a succession of blossom. They can be sown in the soil round the bulbs, or grown elsewhere and transplanted into position. Most suitable of all are the dwarfs, semi-dwarfs and trailing plants which are frequently grown in the garden, and, in general, those that do not dislike a dry soil are most satisfactory. Half-hardy subjects (marked with an asterisk in the list) have to be raised in a cold frame, but the others can quite well be sown where they are to grow. Personally, I prefer to grow them in the borders and transplant them in due season; in sooth, I thin out my annuals with this idea in view. Sow the seeds rather thickly if the plants are to be grown continuously in the rock garden, in case bad rains in April may wash away some of the surface soil. Thin out the seedlings when they have made four true leaves.

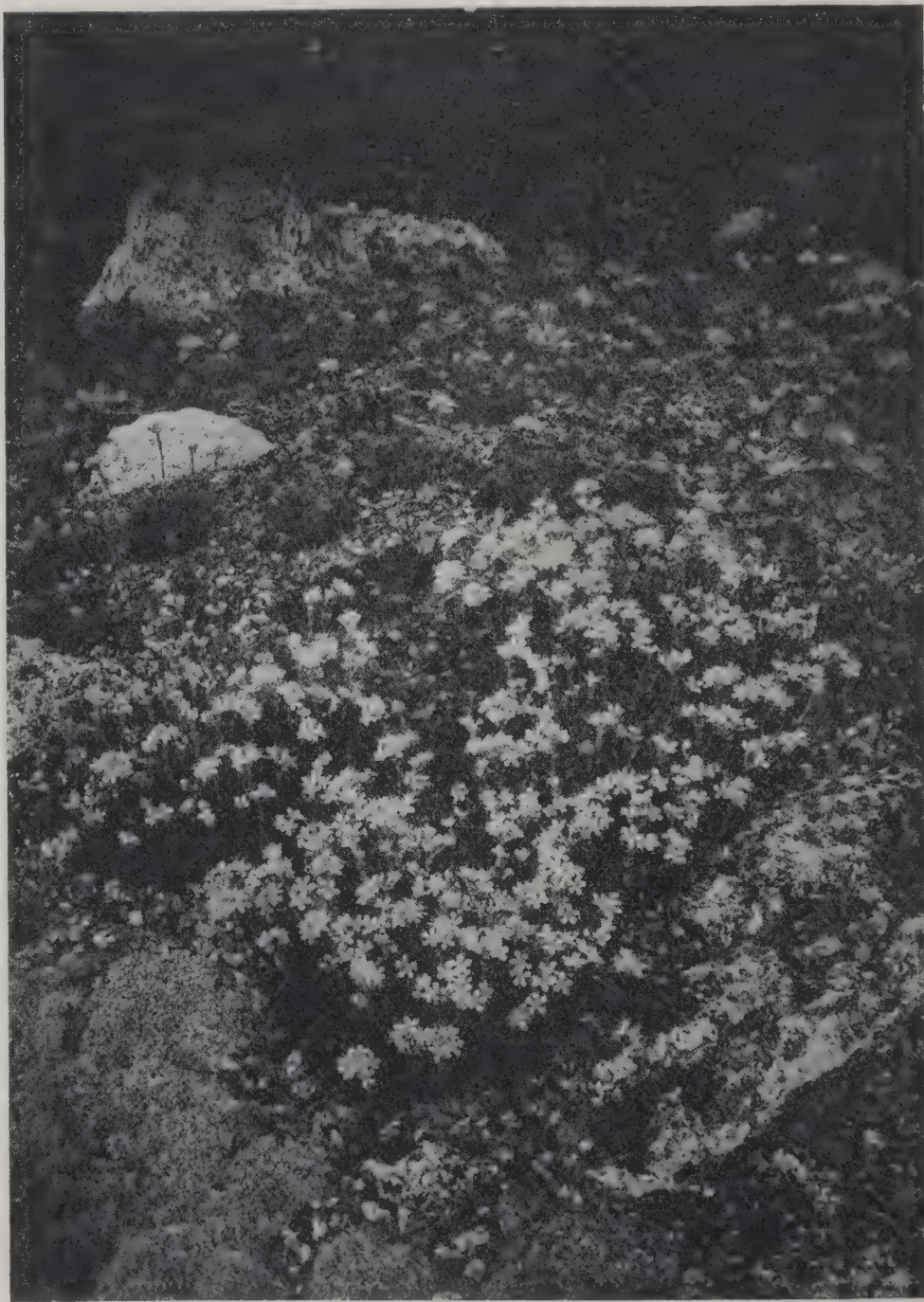
Here are some of the very finest varieties, selected mainly for brightness combined with massive effect: **Abronia umbellata*, fragrant, lilac, trailer; **Ageratum Dwarf Blue*, very free-flowering; *Alyssum maritimum*, dwarf, white; *A. saxatile* (Gold Dust), yellow, both very fine; **Arctotis breviscarpa*, orange colour, suggestive of the *Calendula*; *Campanula attica*, either in purple or in white varieties, profusely flowering dwarfs; dwarf hybrid *Candytufts*, various varieties; *Collomia coccinea*, suggestive of the *Bouvardia*, scarlet and tall; *Eschscholtzia Mandarin compacta*, a brilliant orange; *Gilia nivalis*, white, and *G. minima cærulea*, beautiful blue, both 4 inches to 6 inches in height; *Godetia Bijou*, the smallest of its class; *Gypsophila repens*, red and white; *Ionopsidium acaule*, a close-growing, very dwarf plant, lilac; *Leptosiphon androsaceus*, pale purple; *Limnanthes Douglasii*; *Kaulfussia amelloides*, white, blue or crimson; **Mesembryanthemum tricolor*, must be grown in a sheltered, sunny nook; *dwarf *Nemesias*, various, but only employ the most brilliant kinds; *Nemophila*; **Nycterinia capensis*, white and blue dwarfs; **Pansies* and **Violas*; **Phlox Drummondii* of the smaller sorts; *Platystemon californica*, a kind of trailing Poppy with

cream flowers; **Portulaca*, very dainty; **Salvia roemeriana*, fine scarlet flowers; *Sanvitalia procumbens* of double sorts, yellow and crimson; *Saponaria calabrica*, rose or white; **Schizanthus pinnatus*, very floriferous; *Silene pendula compacta*, various colours; **Tagetes signata pumila*, yellow gems; *Virginian Stock*, fine in the mass, but be sure to get selected forms; *Veronica glauca*; and *Whitlavia grandiflora*, rather large.

H. H. A.

SAXIFRAGA HAAGEI.

WHEN better known, this garden hybrid promises to be quite a favourite among early flowering



SAXIFRAGA HAAGEI. AN EARLY FLOWERING HYBRID FOR THE ROCK GARDEN, WITH DEEP YELLOW FLOWERS.

Saxifrages. The flowers are bright yellow, rising about two inches above the soft green foliage. The flower-stems are red, and, when well grown, there are usually seven flowers to each inflorescence. This hybrid was raised by crossing *S. sancta* and *S. Ferdinandi-Coburgii*, and is a worthy descendant of two admirable parents. In general appearance it somewhat resembles *S. sancta*, the well-known species from Mount Athos. It does best in a sunny position and limestone soil. The flowering season is March and April, and it makes a suitable companion plant in the rock garden to the lighter-coloured *S. apiculata*.

HALF-HARDY ANNUALS.

THERE are some very beautiful annuals which really only come to perfection when raised in gentle heat with a protective covering of glass, such as a greenhouse or frame affords, or simply in boxes covered with glass; hence the name "half-hardy." Where space is limited or from other causes a greenhouse or frame is not available, the last-mentioned method will be found to answer admirably for many varieties if placed in a warm and sheltered aspect. A light frame is, however, a most useful adjunct

to any garden in this connection, and will repay its cost even during its first season. After raising young plants the frame top can be removed, some additional soil dug in, and the space used as open garden for the reception of some of our seedlings, thus economising room. The writer has frequently grown prize annuals in this way. It will be found good practice to sow seeds in shallow pots, pans or boxes which can be fairly easily handled. It is important that these receptacles should be thoroughly well drained. Above coarse siftings of loamy turf, a mixture of fine soil and leaf-mould, with a good sprinkling of sharp sand, comprise a fertile seeding compost. A test for a good soil is that it does not clog when pressed together in the hand.

The whole of the varieties given in this article may be used, after hardening off, in a similar capacity to annuals of the hardy type, *i.e.*, massed in small beds, each of a separate colour (a charming method where sufficient room is available), or in a mixed border among more permanent plants.

Bearing in mind a few general principles, there should be every reason to expect success, the result being a garden of beauty and perfume. The interesting practical experience also gained by growing one's own plants will be found to be of great value, and withal fascinating. Not only that, but it adds credit to the garden, and, incidentally, to the gardener. It is best to sow very thinly in receptacles which have previously been lightly watered, covering the seeds with about their own thickness of soil passed

through a small-meshed sieve. The seed-boxes should afterwards be kept slightly on the dry side, and, if those containing very small seeds absolutely require moisture, they should be stood for a time in vessels of water. An important factor is to prick out early, when two pairs of leaves have formed, to 3 inches or 4 inches apart, setting the plants in moist soil up to their seed leaves. If given plenty of air, kept near the glass and away from hot sun, sturdy plants should be the result.

The following selections will be found to contain some of the best: Stocks.—Varieties of

Ten-week, East Lothian and Brompton; sow early. *Salpiglossis*, 2 feet (various). *Phlox Drummondii*, 1 foot (various). Double Asters *Victoria*, *Comet* and *Ostrich Plume*. Single Asters *sinensis* and *Single Comet*; use wood-ashes and a little old soot as manure for Asters. *Schizanthus hybridus grandiflorus*, 1 foot (various). *Verbena*, 1 foot (various). *Nemesia strumosa Suttonii grandiflora*, 1 foot (various). Double *Zinnia*, 1½ feet (various). *Marigold*, 2 feet, *African*, *Lemon*; *French*, *Tall Orange*. *Cosmos*, 2 feet to 3 feet, *Rose Queen*; *Cosmos* requires very little manure. *Dimorphanthera aurantiaca*, 1 foot, orange, black centre. *Gaillardia picta*, 1 foot, yellow and scarlet. For climbing: *Cobæa scandens*, purple, *Tropæolum canariense*, *Humulus japonicus variegatus* (annual Hop), and *Ipomœa coccinea*, scarlet; sow where plants are to bloom. For edging: *Lobelia*, blue and white, and *Verbena nana compacta*. Everlastings (for winter decoration): *Helichrysum*, 1 foot to 2 feet (various); cut the blooms before fully open. *Rhodanthe*, 1 foot (various). B. W. LEWIS.

PLANTING ALMONDS FOR EFFECT.

How often one sees the Almond and other spring-flowering trees with red or pink flowers planted in close proximity to a red brick building, so that the beauty of the flowers is lost against the unsuitable background! With summer-flowering trees this may not be so apparent, but with trees that bloom before the leaves unfold, too much care cannot be given to the choice of a favourable site.

Possibly the Almond is seen to greater disadvantage than any other tree, for, owing to its adaptability to town life, it is frequently seen in small gardens near large towns, and especially in the suburbs of London. Indeed, it has been observed that the Almond produces a greater abundance of blossom near to main thoroughfares than it does in the quiet surroundings of a large park or garden. The reason given is that the trees near thoroughfares are unmolested by birds, whereas in sequestered places the birds do considerable damage to the buds in the spring.

In the accompanying illustration is shown the Almond flowering with good effect near a garden walk. Here the trees have been thoughtfully interspersed with dark evergreen conifers, against which the light-coloured flowers of the Almond trees are thrown up in marked contrast. The flowering of the Almond is always a matter of interest to Londoners. This year the first blooms were noticed in the early days of February, last year on January 25, but in the cold spring of 1909 the first blooms were not observed till April 1. The Almond is known botanically as *Prunus Amygdalus* or *Amygdalus communis*, and the fruits are clothed with a velvety pubescence. On the Continent the Almond is grown for its fruits, but in this country they do not appear to have any commercial value.

THE IMPROVEMENT OF GARDEN ROSES.

THE article upon "The Improvement of Garden Roses," in your special Rose Number of October 11 last, from the pen of "White Rose," was very interesting, owing to the superfluity of new varieties. Last year established a record so far as the National Rose Society and gold medal awards were concerned, and the behaviour of the varieties that have been so honoured will be watched with keen interest by growers all over the country. The demand for Roses is now immense, and during the last decade has altogether altered in character. Exhibition varieties purely and simply, and also those sorts that are not of value as "cut-backs," have fallen upon evil days, and the

has also the effect of debarring many excellent garden Roses from the highest award a variety can obtain. After all, however, as your correspondent puts it, there is another court of appeal, and that is the amateur growers of the country.

I know that "White Rose" is very interested in the welfare of the National Rose Society, and that he is a very active and sympathetic member of that organisation, and I take it as a very hopeful sign when I see him writing that, "As matters are now arranged it is to the amateurs chiefly and finally that we must look to secure the results we desire." The amateur rosarian of to-day is rapidly becoming quite independent of catalogue descriptions of Roses, and, what is more, he is becoming very chary of the awards to new varieties. The modern amateur—I am writing of the majority—is a grower of sturdy and healthy independence; he knows what he wants for decorative purposes, and he sees that he will get it ultimately.



ALMONDS EFFECTIVELY GROUPED WITH DARK-LEAVED SHRUBS.

demand for Roses of this description is rapidly becoming less and less. The call is now for what are termed garden or decorative Roses, and raisers, judging from the "National" shows of last year, have not failed to respond.

But there is one unsatisfactory point in the judgment of this somewhat modern section of Roses. The system of granting awards to exhibition Roses may be sound enough, for, after all, the flowers are only required to be at their best upon the show benches; but, surely, a totally different method is necessary for assessing the value of varieties that are required for the decoration of the garden and home. The value of such a Rose can never be ascertained from a mere collection of flowers staged upon a bench in tubes or boxes. The present system, while admitting many valuable Roses to premier honours, and at the same time doing a similar service to some that are worthless,

"White Rose" observes that the amateur will get what he wants by vigorous criticism and the elimination of undesirables, and this is precisely what is being done. For example, in the West of Scotland there is a very large and increasing circle of enthusiastic amateur rosarians. These growers have their wants catered for by weekly articles in the columns of an influential Glasgow evening newspaper. The editor of the gardening columns last autumn took a plebiscite of his readers upon the twenty-four best garden Roses, and the result was a list that reflected little credit upon the enormous number of new Roses of recent years. Nearly one hundred and fifty lists were received by the editor, and it is obvious, from the observations made by the contributors, that they were really up-to-date and had tried most new sorts. If criticism of this description becomes more general—and it fully seems to tend in this direction—it will be

welcome if it helps to teach those who are responsible for gold medal awards what modern growers really require. I offer no suggestion as to an alteration of the present methods of the National Rose Society in respect to new Roses, but I commend the last paragraph of "White Rose's" excellent article to the careful attention of its Council.

Mid-Lothian.

GEORGE M. TAYLOR.

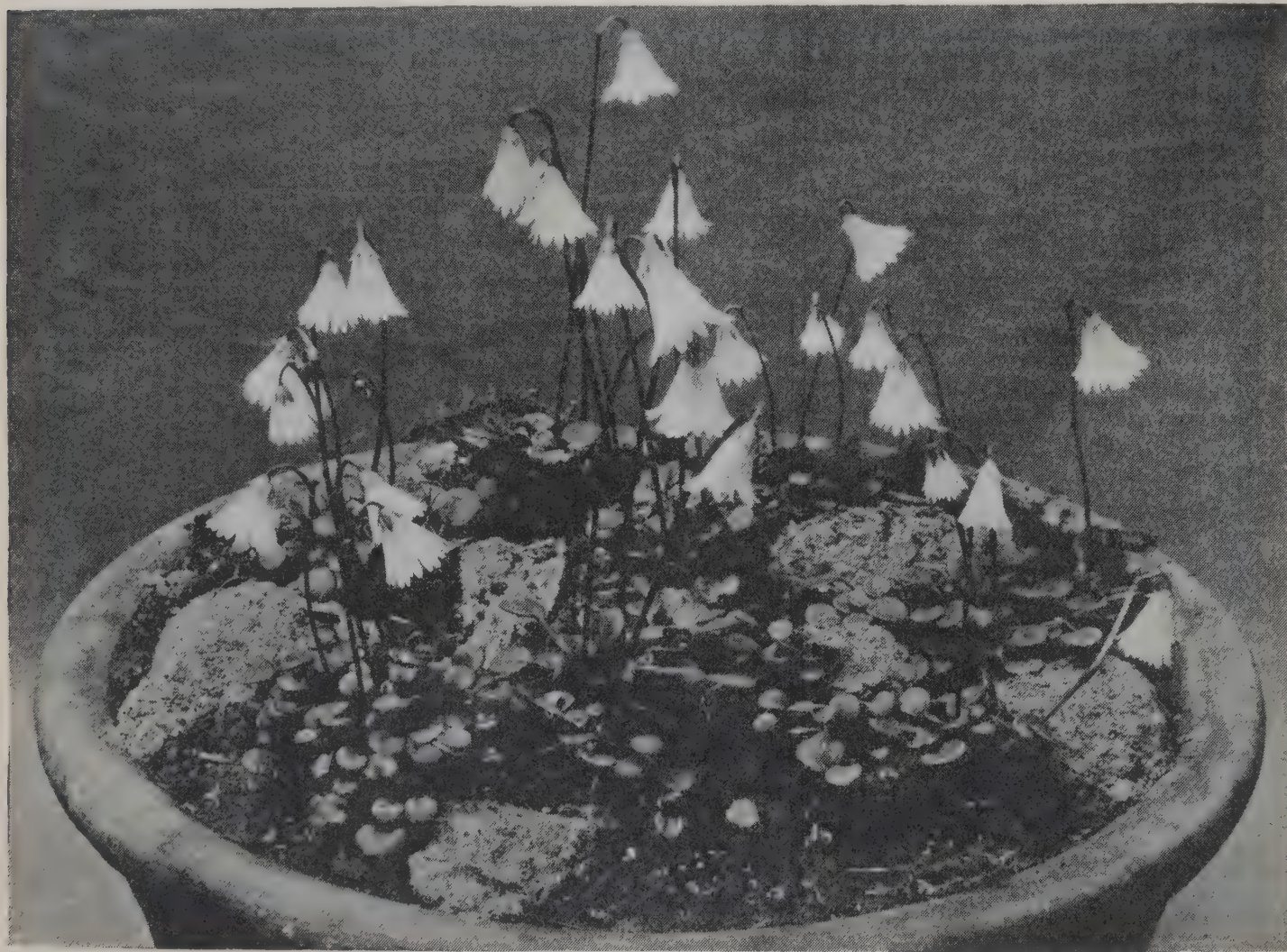
[We shall be pleased to publish the views of other readers on this important subject, but we hope they will be as concisely expressed as possible.—ED.]

POTATOES.

UNDoubtedly the Potato is the most valuable of all vegetables grown in a garden. In very small gardens where a fair number of vegetables are to be grown, and only a few of each kind to provide variety, early Potatoes only should be planted, so as to allow of space in the summer-time for

soil is pretty well freed of both small and coarse weeds.

Digging and Manuring.—I need not refer in detail to the work of digging. It will be sufficient to say that the soil must be broken up and the subsoil loosened in the case of new ground, and that a subsequent turning with the garden fork of the top 12 inches will be advisable. Cultivated ground will only need once digging. In every instance well-rotted manure should be used in preference to fresh or green manure. Some growers simply put the manure in the drills or trench and lay the tubers on it, afterwards covering them and the manure with soil. It is much the best plan to dig in the manure evenly over the whole of the ground a few weeks prior to the planting of the tubers in the case of heavy, retentive soils, and then, when the tubers are planted, simply move the top portion to cover the tubers without turning it over and exposing the buried manure. When dealing with light soils, the manure may be applied at the same time as planting is done.



A BEAUTIFUL ALPINE PLANT, SOLDANELLA PUSILLA ALBA. THIS RECEIVED AN AWARD OF MERIT FROM THE ROYAL HORTICULTURAL SOCIETY ON THE 24TH ULT.

several kinds of winter greens to be planted. In larger gardens, early, midseason and late varieties of Potatoes may be grown in quantity, according to the requirements of the cultivator.

Cleaning the Soil.—Some persons say, "Oh! plant Potatoes; they clean the soil better than any other crop." It is not the crop that cleans the soil, but the treatment of the soil necessary to the well-being of the Potatoes. The ground must be well worked before the tubers are planted; the loosened soil is moved during the earthing-up process, and again when the crop is gathered; also, there is considerable hoeing done to keep down surface weeds. A good cultivator does this, and also gets rid of deep-rooting weeds at lifting-time, so that at the end of one year the

It should be spread on the surface and dug in with the soil generally, thoroughly mixing it with the latter. In clayey soils, with which I have had to deal, I have had some trouble in growing tubers with a clean skin. After several seasons of unsatisfactory results I scattered dry lime in the trench, on tubers and soil alike, before covering the former with soil in the usual way. From plots so treated I had Potatoes so clear in skin that they were fit to exhibit in good company. I never measured the lime applied, but used sufficient to make the soil look quite white. The following are good sorts for general planting, and are suitable for a garden of medium size.

Early.—Midlothian Early, a white kidney with white flowers; Sharpe's Victor, white kidney.

light lavender, white-tipped flowers; Sir John Llewelyn, white kidney, white flowers; Duke of York, white kidney, white flowers.

Second Early.—Windsor Castle, white round; Radium, white round, white flowers; British Queen, white kidney, white flowers; Herd Laddie, coloured round; and Mr. Bresse, coloured kidney.

Late.—The Factor, white round or oval, mauve flowers; King Edward VII., coloured kidney, mauve flowers; The Admiral, white round, flowers white; and Up-to-Date, white kidney, mauve flowers.

AVON.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Narcissus Syphax.—This was entered for "garden and cutting." It is a self-coloured flower of rich golden yellow. After Buttercup in shade, but not in form. The stem is long and good.

Narcissus Tita.—A fine, big red cup, also recommended for garden and cutting; and certainly by the length of stem shown, it should prove an excellent garden variety.

Narcissus Sunrise.—This is an incomparabilis sort, with rich scarlet cup and pale creamy perianth segments. Recommended for cutting. These three excellent novelties came from Mr. A. M. Wilson, Shovell, Bridgwater.

Narcissus Eastern Maid.—This in some respects approximates to Sir Watkin, despite the fact that the segments are longer and more pointed, the cup longer and more cylindrically inclined, and the colour a deeper yellow shade. Recommended for show. From Messrs. R. H. Bath, Limited, Wisbech.

Soldanella pusilla alba.—One of the prettiest of its class; a dainty alpine 3 inches high, having heavily fringed, pendent bells of pearly whiteness, slightly stained with crimson at their bases internally. From Messrs. T. S. Ware, Limited, Feltham.

Trillium rivale.—A dainty woodland plant, suited also for cool positions in peat and leaf-mould in the rock garden. It is but 3 inches or so high, quite a miniature in its set, the white flowers copiously spotted with brown. Shown by Mr. James Box, Lindfield, Sussex.

Rhododendron Littleworth Hybrid.—This may briefly be referred to as a giant form of R. argenteum, with larger, longer and whiter flowers. Unfortunately, the anthers had been removed, and

with them a characteristic of the flower had gone. The scarlet-tipped stigma was very conspicuous. Shown by Miss Mangles, Seale, Farnham.

NEW ORCHIDS.

A first-class certificate was granted for an exquisite rich crimson Odontioda named Zenobia. It was shown by F. M. Ogilvie, Esq., Oxford. Awards of merit were made to Dendrobium superbum Huttonii giganteum, shown by W. Walter Butler, Esq., Edgbaston; and to Sophro-Laelio-Cattleya Niobe Orchid Dene Variety, from Messrs. E. H. Davidson and Co., Twyford.

The foregoing awards were made by the Royal Horticultural Society on March 24 at the fortnightly exhibition.

GARDENING FOR BEGINNERS.

DIVIDING AND REPOTTING ASPIDISTRAS.

AMONG the numerous plants grown in pots for indoor decoration, none equals the *Aspidistra* for dark corners, draughty passages and other positions unfavourable for plant growth in the house. It may be safely said, without fear of contradiction, that no other plant is used so extensively. One has only to visit a market nursery and see house after house of *Aspidistras* containing thousands of plants, or Covent Garden in the early morning, to recognise the enormous demand that exists.

Aspidistra lurida, to give our friend its full botanical name, is said to have been first introduced to this country from China in 1822, and two years later, in 1824, a very nice figure was given of the plant in the *Botanical Magazine*, plate 2499. Though of such inestimable value as a foliage plant, the flowers are insignificant, though very interesting to those who love the quaint and uncommon. They appear generally in early spring, nestling among the stalks of the leaves

there is no need for repotting. The plant illustrated has been grown in a room for nine years. During that time it has only been repotted once, and now requires it again. The plant is large enough to divide into two, or, if desired, may be potted on into a size larger pot. For plants growing in a room it is most important to have ample drainage in the bottom of the pots to allow water to pass away freely. Place, as shown in the illustration, one large crock over the hole in the bottom of the pot, next several rather smaller pieces, and on these some still smaller, covering all with a little moss to prevent the soil trickling down and stopping the surplus water from passing out at the bottom. Sometimes when repotting *Aspidistras* the soil is in such bad condition that it is necessary to wash all the old soil away from the roots; in others, when the soil is sweet, only the loose soil need be taken off.

Aspidistras are such good-natured and hardy plants that repotting checks them little, if at all. While most of what has already been written applies to both the green-leaved and variegated-leaved *Aspidistras*, those with the beautifully marked white and green leaves require more care and attention to grow them successfully. As much light as possible must be given them, as in dark corners the leaves are inclined to gradually revert to green, from which in the first instance they have been selected as sports. There is nothing better than a little lukewarm soft water and soft soap for sponging the leaves of *Aspidistras*. On warm, showery days it is very beneficial to stand the plants outside for a few hours. O. A.

SOOT AS LIQUID MANURE.

Soot, used with care, is very valuable in the garden, but frequently it is applied injudiciously, and then the results are unsatisfactory. We only want the essence and not the sediment but there is a mistaken idea that the soot-water, to be of any benefit to plants, must be very black, like the soot itself. This is, of course, the wrong way to use the liquid. If we brew coffee, we use the clear liquid as a beverage, and not the grounds or sediment. Soot must be kept in a box or tub in a dry shed. When a liquid is required, put a peck of the soot in a coarse bag or piece of sacking, tie it up tightly, and immerse in a tub or other vessel containing twelve gallons of water. The bag of soot must be violently moved to and fro twice a day for a week; then use the clear liquid, taking it out very carefully so as not to stir up the sediment.

For the general watering of plants in pots, one pint will be sufficient to mix with a gallon of clear water; for plants in borders, use twice the quantity. In every case the plants must possess plenty of roots, and the soil must be fairly dry before clear water is given, to be followed one hour afterwards with the soot-water.



2.—IF DESIRED, THE PLANT CAN BE DIVIDED INTO TWO OR MORE PIECES.

When the sediment is used and the soot applied in a natural state, the pores of the soil are blocked, and then, through sourness, the roots perish. In the open border, dry soot may be applied, of course, to ward off slugs from young seedlings; but the soot must not be scattered on the foliage. If to be mixed with potting composts, the soot must be stored for at least three months. Never use soot and lime in a closed frame where there are plants, as the lime liberates the ammonia, and, if confined, the leaves of plants are burned. SHAMROCK.



3.—A SECTION OF A POT, SHOWING HOW IT IS DRAINED, AND A DIVIDED PORTION POTTED.

1.—AN ASPIDISTRA THAT NEEDS REPOTTING.

and quite close to the soil in the pot. Less than an inch across when fully expanded, the blooms are buff outside and rich purple inside. The *Aspidistra* gets the name of *lurida* from the poor quality of the flowers, the common name of the Dingy-flowered *Aspidistra* being also sometimes used.

The Best Time to Pot the plants is during March and April, those who are fortunate enough to possess a greenhouse doing such work in March, while April is soon enough for plants which, when potted, must be kept in a window or room. *Aspidistras* will grow in most soils, a suitable compost being a mixture of three parts loam, one part leaf-mould and one part coarse sand. There is no necessity to put *Aspidistras* in large pots, though the roots must not be unduly crowded; the plants will be found to thrive better when the quantity of soil in the pot is not excessive in comparison with the size of the plants.

The question of when a plant requires repotting and how often may now be considered. As long as a plant remains healthy, the soil in the pot keeps sweet, and the leaves are not unduly crowded,

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Cherry Trees in Pots.—This is a precarious crop, and requires careful attention until the stoning period is over. Examine the pots several times daily, and when necessary a good soaking of clear water should be given. The ventilators should never be closed until the second swelling has commenced, and it is far better to let the temperature drop to 40° than to employ fire-heat to keep it higher.

Young Dormant Vines.—Now is the time to plant young dormant Vines. Let every particle of soil be carefully removed from the roots, which must not be exposed to the air for any length of time before they are placed in position, and covered with 2 inches of fine soil from the border, which should have been made up a month ago. When the Vines are planted, water with clear soft water, but only in sufficient quantity to reach the roots. Place a stick to each plant, and, when the shoots are sufficiently advanced, disbudding should be carefully performed, leaving the necessary leading shoots as near the bottom wire of the trellis as possible.

Vine Eyes.—If these were inserted in small pots early in the year, they should now be ready for potting into 6-inch pots. The soil may consist of three parts rich loam, one part leaf-soil, and sufficient silver sand and fine lime rubble to keep the compost porous. Young Vines are easily injured at this stage, therefore potting should take place in the house where they are growing. Support each plant with a stick, and shade for a few days, but as soon as possible the plants should be exposed to the sun. Syringe frequently in order to promote a humid atmosphere.

Plants Under Glass.

Bouvardias.—Early struck cuttings will now require potting, either singly in small pots, or, if struck three in a pot, they may be potted without division, and will make useful plants for early winter flowering. As the season advances and the plants have grown to a useful size, they must be gradually hardened, so that during the summer they may be grown in a well-ventilated pit.

Mignonette.—Plants which are approaching the flowering stage may be watered frequently with weak guano-water, and from now onward they must never be allowed to become too dry at the roots. A further sowing of Mignonette should be made now to provide a succession to those plants which have been cultivated during the spring. Red Monster is one of the best varieties for this purpose; 5-inch or 6-inch pots will be quite large enough.

The Flower Garden.

Montbretias.—If the corms were lifted in the autumn and placed in cold frames, they will now have started into growth, and should be planted out as soon as possible. At Frogmore these roots are lifted each season and wintered in a cold pit. In February, part of the corms are potted, allowed to start into growth, and planted out in April. By this means earlier flowers are obtained, and the supply prolonged by planting dormant corms for succession.

Violets.—If cuttings were taken in the autumn and wintered in cold frames, there will be no difficulty in finding a sufficient number of stocky young plants ready for planting out now. If thoroughly hardened, they may be lifted with a nice quantity of soil to each plant and carefully planted on a well-prepared border. Single varieties may be allowed 18 inches each way between the plants, and double varieties a foot from plant to plant. We grow a large number of Violets at Frogmore, and all of them are struck in the autumn. The old plants are thrown away as soon as the flowering period is over.

The Hardy Flower Border.—Most of the plants have started into growth, and any regulating or transplanting still to be done should be finished without delay, as if dry weather sets in they may suffer seriously. The surface of the border may be carefully stirred with a Dutch hoe. If necessary, the growths of Asters and Phloxes may now be

thinned out, removing the weaker shoots, and others also where they are too numerous. Vacant spots near the front of the border may now be filled with Pentstemons, Antirrhinums, Agrostemma coronaria and Carnations, all of which are well furnished with foliage as well as flowers.

The Hardy Fruit Garden.

Fruit Trees on Walls.—Apricot, Nectarine and Peach trees will still require protection from frost and dashing rain, for, the drier the flowers and foliage are kept in cold weather, the better will be the prospect of a successful crop. While the blossoms are kept dry, they will withstand a considerable degree of cold without injury. As soon as the fruits are set, the trees should be carefully examined, and if any aphides are present, their destruction must be accomplished as soon as possible.

The Kitchen Garden.

French Beans.—These may be sown either in heated pits or forcing-houses, and may be expected to produce pods about the end of May. Plants now in bearing may be frequently watered with weak liquid manure. Syringe twice daily and shut up the house early in the afternoon. Seeds may now be sown in small pots for planting in cold pits about the middle of April.

Winter Greens.—Kales for winter use should be sown with as little delay as possible, and another sowing made about the end of April for use later in the season. Broccoli for autumn and winter supplies should be sown about the end of April.

Seakale.—If Seakale thongs were prepared and placed in a warm border during the winter, the plants should now be ready to put out. Plant in rows 2 feet apart and allow a foot from plant to plant in the rows.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Carrots.—Preparations should now be made for sowing the main crop of this important vegetable. The soil best suited for their successful cultivation is one of a deep sandy nature, but I must not be understood to say that very good results may not be had from ordinary garden soil, that is if this is skilfully prepared.

Sowing the Seed.—On shallow soils it is usually good policy to sow the intermediate or stump-rooted varieties, while Long Surrey and Altringham will succeed best on deep loams. No one, however, can hope to grow Carrots successfully unless the bed has been thoroughly prepared. The seed should be mixed with fine earth previous to sowing; indeed, in addition to this, I have even gone the length of running some sifted soil into the drills before sowing. Needless to say, the seed should be sown thinly, and thin out when the plants are quite small; if possible, in showery weather. It is at this stage that the maggot makes its appearance, and as a preventive I usually give the ground between the rows a dressing of mown grass from the lawn; this is repeated about every three weeks until all danger is past.

Mushrooms.—A bed may now be prepared to give a supply of Mushrooms towards the beginning of June. Should one be cramped for room, the bed may be made up in an outhouse. Beds giving a supply of Mushrooms will be greatly benefited by an occasional watering with rain-water to which a little salt has been added.

Late Cabbage.—All the late varieties of Cabbage, such as Winningstadt, may now be sown, as well as a pinch of seed of Red Cabbage, which is so much in demand for pickling in the autumn.

The Flower Garden.

Bulbs.—The various sorts of bulbs that have been forced should be collected and placed in a frame, where they can be attended to in the way of watering until the foliage is matured. These may be planted out in the autumn in convenient places in the wild garden. Daffodils, of course, may be planted in nursery lines in the garden and forced again in two or three years' time.

Spiræas may be planted right away in some marshy spot, where they soon make handsome plants. Azaleas should have the faded flowers removed, and be kept under cover until the young growth is completed.

Hardy Annuals.—The present will be a suitable time to sow the majority of hardy annuals, particularly those that do not bear transplanting. The sowing of all hardy annuals may be made where they are to flower, provided they are sufficiently thinned. This thinning is important, as it not only prolongs the blooming period, but the flowers themselves are much finer. Such annuals as *Dimorphotheca aurantiaca*, with its gorgeous orange flowers, are extremely effective, and for producing a blaze of colour, perhaps the *Godetias* stand unrivalled. The variety *Scarlet Queen* made a brilliant display here last season. *Phacelia campanularia* is singularly striking with its bright blue flowers, which last a long time in bloom. And what of the ever-popular *Shirley Poppy*, with its endless variety of colour, and that chaste little *Swan River Daisy* that always arrests attention! It would be difficult to imagine anything more showy than that old favourite, *Saponaria calabrica*. Last season I saw this in perfection. The gardener had sown it over some stones and old roots, and when in bloom it resembled a huge cushion of pretty pink, star-like flowers.

Ageratums.—I find it a great saving of labour to grow these from seed rather than propagate by cuttings. They come wonderfully true, and if sown now will last in bloom when almost every other plant is over.

Plants Under Glass.

Begonia Gloire de Lorraine.—By this time the main batch of cuttings should be got in, and it will be found that with the increased sun-heat cuttings inserted now will possibly overtake those rooted earlier. They may be inserted three in a pot in a compost containing a good proportion of silver sand, taking care to make the soil quite firm around the cuttings. Where one cannot command a propagating-case, the same results will be obtained by placing the small pots among half-decayed leaves in a box of convenient size. Cover the box with glass and stand it on the pipes in an early vinery.

Richardias (Arums).—As these go out of bloom, continue to give an occasional watering with liquid manure to mature the crowns for next season's flowers. Let the foliage ripen off naturally, and by no means stand them out of doors until all fear of frost is gone. It is true that at this stage they become unsightly; still, if we expect to procure a supply of these noble flowers, we must give them a chance.

Greenhouse Rhododendrons.—The majority of these lovely Rhododendrons will now be coming into bloom, and as they are usually grown in large pots or tubs and not potted very frequently, they should be given liberal supplies of liquid manure. The variety *Lady Alice Fitzwilliam*, with its exquisite fragrance, is one of the best, and if allowed to grow naturally makes handsome specimens. I find that if the blooms are cut just before the buds open, they travel well and stand quite a long time in a cut state.

Shading.—With the increased power of the sun, all houses requiring shading should be seen to at once, otherwise much damage will be done to the young Fern fronds and Palms.

The Hardy Fruit Garden.

Beyond giving protection to trees and bushes as they come into flower and keeping the ground free from weeds, very little will require to be done at the moment in this department. Apples and Pears, however, may still be grafted where this was not done earlier.

Fruits Under Glass.

Melons.—Those planted last month will now be growing freely, but water should still be given with care, more especially round the neck of the plants. There is still a sharp bite in the air, so that ventilation will require to be done with caution. It will be well to close down the house early in the afternoon, and thus husband as much sun-heat as possible. Seed may now be sown to keep up a succession of ripe fruit.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

MY SMALL ROCK GARDEN: HOW I MADE AND PLANTED IT.

(Continued from page 161.)

WHERE some bay occurs (preferably close to the path edge), it is well to form a "semi-bog" by taking out the soil to the depth of a foot at least, and partially lining the "dish" so formed with clay. If into this receptacle a mixture of peat moss litter (rubbed through a half-inch sieve), leaf-mould, small brick grit and sand is placed, it will accommodate a host of plants which delight in a moist rooting medium, such as *Primulas*, *Soldanellas*, *Erythroniums*, *Polypodium Dryopteris*, and so on. Peat moss litter I have found a splendid material as a substitute for the more expensive peat, and it forms an excellent "sponge." The bales should be opened and allowed to become moist, when the stuff crumbles down to the size of Coconut fibre. It should, of course, be used new—not after it has been in the stable. At some point not far from the eye it is well to form a gently rising piece of ground, where a number of small, irregularly sized beds will accommodate the choicer *Saxifragas*, such, for instance, as *S. burseriana*, *S. rocheli-ana*, *S. Elizabethæ*, *S. marginata*, *S. cochlearis* and its variety *minor*, and *S. Salomonii*, varied here and there with the choice *Woodruff*, *Asperula suberosa*, and the dainty *Linum salsaloides nana*. A little further off, in crevices in rather more rocky ground, *S. lingulata* will display its narrow-leaved rosettes, while in steeply rising, sunny positions *S. longifolia* should be planted in such a way that the rosettes project through a small opening between the stones, and the roots wander away in a semi-horizontal direction behind, amid the gritty, limy compost. In rather similar positions, though in shade, the lovely *Ramondia pyrenaica* can be planted, say, half a dozen in a group, a few inches apart.

The more shady portions of the garden can be planted with the many coloured species of the Mossy *Saxifragas*, such as *S. cæspitosa*, *S. muscoides*, *S. Wallacei*, *S. Clibranii* and *S. bathoniensis*, while their vivid green foliage can be varied by the umbrosa section, such as the type—*S. Geum* and *S. cuneifolia*.

Alpine Pinks.—Among the *Dianthus* family, *D. arenarius* will adorn rocky crevices and drape the adjacent stones with a wee green mantle, which in its flowering season will be a sheaf of white, deeply fringed flowers. In a more choice spot (as well as in the moraine), in especially gritty soil, the narrow, grassy leaves of *D. neglectus* will make a tiny mound, surmounted in June or July with rich, deep carmine blossoms. Similarly in free soil (and, strangely enough, sun) *D. sylvestris* and its dwarfer form, *D. frigidus*, will do well, while on some sunny knoll in quite ordinary, though free soil the Cheddar Pink (*D. cæsius*) will make a welcome patch

Silvery *Saxifragas*, such as *S. Hostii*, *S. Aizoon* and *S. Cotyledon* and its variety *pyramidalis*, can well be employed to garnish crevices between steeply rising rock, and in such positions the arching sprays of white and pink dotted flowers will show to great advantage.

On the sunniest stones Houseleeks can be grown, provided a little soil is given them and they are tended with water until established. The species *Sempervivum arachnoideum* (the Cobweb House-leek) is especially attractive, as it makes silvery hummocks surmounted by rich rosy, star-like flowers. Other decorative *Sempervivums* are *S. Tristii*, *S. fimbriatum*, *S. calcareum* and *S. globiferum*.

Of the *Sedums* or Stonecrop family all are useful, and some especially so. *Sedum Sieboldii*, for instance, with glaucous-coloured foliage, changing to rich rosy copper by the autumn, when its

Stepping Stones.—As every portion must be conveniently reached, it is necessary to place stepping-stones at distances apart, making them as inconspicuous as possible by employing suitable irregularly shaped pieces of flattish stone and "working" them into the design. In my case I made the chief path round the outer portion of the garden, and then arranged several narrow, sinuous tracks more towards the centre (exclusively for my own use), and these were varied by making some merely in the form of stepping-stones, while others were built more solidly and continuous, in the form of a rough, irregular stairway, and, by cementing them at the joints, water, conveyed in a concealed pipe to the highest point, could in the summer-time trickle over them as a miniature cascade.

A Small Pool.—If a tiny pool can be arranged at the lowest part, a considerable charm is



THE COBWEB HOUSELEEK ON A SUNNY LEDGE, WITH ARENARIA CÆSPITOSA IN THE FOREGROUND.

trusses of pink flowers terminate the growths, is most welcome, while *S. Ewersii*, *S. kamschaticum* and *S. altissimum* are attractive.

In hot, sunny positions, where a striking effect is desired, the Sun Rose (*Helianthemum*) in varying colours can be grown, though it is apt to be too large for a small garden; while, if room is available, the dwarf shrub, *Cistus formosus*, with yellow flowers, and *C. purpureus*, with large red ones, are very attractive.

On some steeply inclined portion of the garden in full sun, where there is no trace of lime in the soil, *Lithospermum prostratum* and its variety *Heavenly Blue* make a beautiful cascade of deep green foliage and Gentian-like, blue flowers more or less throughout the summer; while, at the base of such a bluff, *Campanula pusilla alba* can be allowed to ramble, sending up myriads of dainty, 4-inch-high blossoms

added, and near its margin a wet bog can be built by making a bed which will contain peat, sand and leaf-mould in about equal proportions, and such showy plants as *Primula japonica*, *P. pulverulenta* and *P. sikkimensis* will thrive there, while at the extreme water's edge *P. rosea* will revel. If as a background to these there is room for a crown or two of the fine bold foliage of the Umbrella Plant (*Saxifraga peltata*), we can have in miniature the bold effect of a *Gunnera*. As a contrast to the foregoing, either in the water or near its edge, a spathe or two of the common yellow *Iris* gives a beautiful line with its sword-like foliage, though it needs keeping rigidly to a small plant, otherwise it will outgrow its position.

Not only should the garden be decorated with the more or less evergreen plants, but the whole range of dwarf bulbous subjects is open to the

cultivator, and many of these find congenial homes beneath the low carpeting plants. By this means it is possible to have what is practically two crops on the same ground, and the garden may then be flooded in the early part of the year with glorious streaks of blue, where the Glory of the Snow (*Chionodoxa*) spread, while rosy lilac splashes denote *Bulbocodium vernum*, *Scillas* in various colours, early and late flowering species of *Crocus*, and *Narcissi* in varied sizes, from the wee *N. minimus*, only 3 inches high, upwards. Tulips, such as *T. persica*, *T. pulchella*, *T. kaufmanniana* and a host of other similar plants should be employed, and most of them thrive well in the normal compost.

Silvery Leaved Plants.—Silvery foliaged plants, such as *Artemisia vallesiaca*, *Androsace lanuginosa* and *Antennaria tomentosa*, should be utilised to the full, and if pleasingly arranged where their shimmering colour will be backed by some darker foliage, very great use may be made of them. Dwarf conifers, too, aid greatly in suggesting a scale in the garden, and should occupy prominent positions, though never at the highest points of the rock garden, unless they are prostrate growing, such as *Juniperus Sabina* variety *tamariscifolia*. The tiny *J. hibernica* variety *compressa* is dwarf and refined enough for association with the smallest plants, while *Pinus Cembra*, *P. sylvestris nana* and *Picea pygmaea* can be used a little further from the eye, and all seem to thrive in the normal gritty compost of the rock garden.

One final word of warning I should like to mention before closing, and that is to emphasise the desirability of preventing the slightest soil leakage. Often at the point of junction between two stones the insertion of a fragment of rock, either with or without a touch of cement to hold it in place, makes all the difference between success or failure with the inhabitant of the position. Not only does the soil trickle down on to plants below and render them partially submerged, but the leakage rapidly forms a space beneath the higher stones, a matter which should on no account be allowed to occur, and which, when present, almost invariably results in the death of the plant whose roots have wandered in that direction. Firmness, solidity and thorough packing of the porous soil beneath each and every stone should be the watchword of the rock gardener.

REGINALD A. MALBY.

THE EDITOR'S TABLE.

A Specimen Lilac from Dersingham.—From Mr. T. Jannoch, Dersingham, Norfolk, we have received a profusely flowered specimen plant of a single white Lilac. The plant was admirably grown, and so heavily laden with large trusses of bloom that we felt compelled to have it photographed, with the result that it is illustrated on page 169 of this issue. The variety is *Marie Legraye*, well known to be one of the best for pot culture under glass. Mr. Jannoch has a world-wide reputation for Lilacs, and all of the plants sent out from his nursery have been grown for two or more years in pots. This is doubtless the secret of his success, for in order to obtain the finest early Lilac flowers it is absolutely necessary that the plants should be established in pots, and the older the plants the better will be the flowers.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment is desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLETS NOT DOING WELL (York).—We find no fungus or insect upon the Violets sent. The great development of leaf with the small amount of flower production suggests that the soil is of too rich a character.

SOWING ZEA QUADRICOLOR PERFECTA (F. H.).—As you have no artificial heat, you may sow the seeds and place in a cold frame in April. Failing this, sow in a warm, sheltered spot out of doors at the end of April or early in May.

THE NEW ZEALAND FLAX (PHORMIUM TENAX) (J. Newbury).—This is hardy in many parts of England. Where this is the case, all that it needs is to plant it out in good loamy soil so situated that it is always fairly moist. If grown in pots, it should be given a compost consisting mainly of fibrous loam, lightened, if necessary, by a little leaf-mould and sand. Under these conditions it must be wintered in the greenhouse or conservatory. A suitable soil for *Lasiandra macrantha* is equal parts of loam and peat, with a good sprinkling of silver sand. The plants should be stopped two or three times during their earlier stages in order to induce a bushy habit.

MANURING BULBS IN GRASS (Kent).—Providing your bulbs appear to be moderately vigorous and the flowers do not deteriorate from year to year, there is no need to apply manure to the grass. We know of many vigorous plantations made twenty years ago which have never been manured since, yet always bloom well. If you do wish to apply manure, however, you may use basic slag and kainit in the proportion of two parts of the former to one part of the latter; use at the rate of 10lb. to the square rod. *Crocuses* and *Daffodils* give good results where the grass is dense, but *Snowdrops* are usually better where the grass is thin. It is doubtful whether *Anemone fulgens* will keep in good condition for more than a year or two, and you would be well advised to carry out a few experiments before making an extensive planting.

HERBACEOUS BORDER AND A PLAN (Anxious).—It is most important that all such borders be set out to a plan, otherwise nothing short of an indiscriminate mixture would result. From the colour point of view it is most essential, and what you have to do is to arrange your plants in informal groups, each group occupying a space of 2 feet or 3 feet, so that the colours will harmonise and not clash. A point to aim at is to avoid arranging in close proximity near akin shades of colour, whether it be blue, pink, violet, purple, rose, salmon, yellow and orange, and so on, stronger and more decisive shades invariably overpowering the weak. By distributing these near akin shades throughout the border in touch with other colours which afford harmony or contrast, a good result is secured. To get a fuller idea of how a border should be set out, you should obtain "The Hardy Flower Book," by E. H. Jenkins, which contains a good plan and much other useful information. It may be had post free from our Publishing Department for 2s. 10d.

MARGUERITE MRS. SANDERS (Santry).—It would not be safe to plant out the Marguerites till the end of May or early part of June. Good garden soil, such as that most suitable for bedding plants, will meet the requirements of this Marguerite. Good clean flowers would doubtless find a ready market. If for quick effect, the plants may be planted from 15 inches to 18 inches apart; but if the object is to readily get between them and pick the flowers, rows 2 feet apart with 18 inches between the plants will not be too much. The cuttings taken now should be fit to plant out in due course.

PLANTS FOR PAVED WALK (N. M.).—You would find the following plants of utility and beauty for the period—July and August—named. All are dwarf growing. When planting, rake out the old soil 3 inches deep from between the stones and apply fresh. Also avoid setting the plants in tufts. By pulling into small portions, a plant or two may prove sufficient to adorn a crevice 18 inches long, from which, in time, they spread naturally.—*Antennaria tomentosa*, *Arenaria balearica*, *Campanula pusilla*, *C. p. alba*, *C. p. Miss Willmott*, *C. pulla*, *C. garganica* in variety, *Hutchinsia alpina*, *Mentha Requienii*, *Sedum corsicum*, *S. hispanicum glaucum*, *S. Lydlum*, and *Thymus Serpyllum coccineum*. A good plant for the bed to appear above the white Alyssum would be *Gladiolus brechenleyensis*. It is scarlet-flowered. Other plants meagre of foliage, flowering at the same time, would be *Montbretias*, though for your district we think the first-named would be the best. The manure you refer to should be excellent for flower beds or, when sifted, for pot plants also. We are pleased you find THE GARDEN of so much assistance.

PLANTS FOR WALL (J. F.).—You have, unfortunately, omitted some important particulars in connection with the wall, and if of ordinary brick, mortar-jointed, and erect, there may be some difficulty in getting the plants to start. The success of the *Aubrietia*, however, gives ground for hope. In the circumstances, so far as we know them, sowing the seeds in the wall would be best, though for a south wall autumn would have been a better time, as the seedlings would be now appearing. Before introducing the seeds, some of the joints should be raked out to a depth of 2 inches, soaking the crevices so formed a few times with water; then, by sprinkling a dozen or two dozen seeds thinly on some moist, stiffish loam, or even clay, the seed-charged soil could be so distributed that the seeds would presently form groups 2 feet or 3 feet across. This principle could be followed throughout, draping or trailing plants, like *Aubrietia*, being kept high, the dwarfier things, like *Erinus*, being set as it were to the middle line of vision. An item of supreme importance is after-attention till the seedlings have taken hold, and the getting of moisture to the roots of plants in a vertically built brick wall is not at all easy. If the wall is of roughly quarried, not "worked," stone, the larger interstices available will render treatment a much simpler matter. In any case, after the distribution of the seed-charged soil, the face of the wall should be daily moistened, as much to hasten the vegetation of the seeds as to afford nourishment later. The following would be of service in the case: *Wallflower*, *Snapdragon* and *Red Valerian* for top positions, if such exist, and where bold plants are required. For the rest, *Aubrietias* of sorts, *Campanula pusilla* in variety, *C. muralis*, *C. garganica*, *Corydalis lutea*, *Dianthus cæsius*, *D. deltoideus*, *D. alpinus*, *D. squarrosus*, *Edraianthus dalmaticus*, *Candytuft (Iberis)*, *Thrift* in variety, *Erinus alpinus*, *E. a. albus*, *Linaria hepaticæfolia*, *Papaver alpinum*, *Saxifraga aizoon rosea*, *S. longifolia*, *S. lantoscana*, *Sempervivum arachnoideum* (seeds or plants), *Edelweiss* and *Zauschneria californica*.

TREES AND SHRUBS.

SHRUBS NOT FLOWERING (Old Subscriber).—Your plants of *Staphylea colchica* and *Xanthoceras sorbifolia* ought to be given the sunniest positions available; then, if growing freely, there is no reason why they should not flower. Do not prune them at all for a year or two, but if very strong shoots are formed, cut the roots round at a distance of 2 feet or 2½ feet from the stems. This, however, is only necessary under exceptional conditions. As a rule, both shrubs bloom freely without trouble, and there is no golden rule by which you can hasten flowering.

TO DESTROY TREE STUMPS (Miss A. C.).—There is no easy means of destroying stumps of trees left in the ground. By uncovering the main roots and boring holes 1 inch or so in diameter in them and filling them with salt, it is possible to kill the stumps, but there is little chance of hastening the rotting process. It is always cheaper in the end to extract roots at the time the trees are felled, for they are a bother for some years if left in the ground which is required for a garden. You can kill the trees and make them suitable for supports for *Roses* by removing a circle of bark 6 inches wide from near the ground; that may be done at once. *Clematises* may still be planted, although it is better to plant them a month earlier. It is not advisable to cut such plants as *Aubrietias*, *Alyssums* and *Armerias* back, but if they are outgrowing their positions, root some young plants in May and destroy the old ones. If your Christmas *Roses* are doing well where they are, do not disturb them. We imagine, however, that the position is rather sunny and dry for them. A moist and rather shady place is more to their liking, but do not change them about from one place to another for flowering. They dislike constant root disturbance. The most inexpensive way to procure broken paving stone for your path would be to obtain it from a local builder or road contractor; perhaps the local surveyor could assist you.

THE GARDEN.

No. 2212.—VOL. LXXVIII.

APRIL 11, 1914.

NOTES OF THE WEEK.

Violet La Belle Parisienne.—At the first glance this double Violet is uncommonly like our old friend Marie Louise, but a closer inspection proves it to be a distinct improvement on that variety. The blooms are larger, have stouter flower-stems, and the colour of the petals is not so red as those of Marie Louise. This is a Violet that is sure to be more largely grown when it becomes more generally known.

Thinning Out Shoots of Herbaceous Plants.—As the stronger-growing plants will now be advancing in growth, they should have their shoots reduced. This will not only strengthen those that are left, but will give less trouble in staking and tying. This will be more necessary with such plants as Phloxes and Asters (Michaelmas Daisies). The latter especially soon get out of hand, and when staked greatly resemble a sack tied in the middle.

A Rare Alpine (*Shortia uniflora grandiflora*).—About four years ago this variety received an award of merit from the Royal Horticultural Society. It is still rare in cultivation and the most exquisite form of a small but delightful genus, of which only two species are in cultivation. The pink suffused, bell-shaped blossoms are fringed, while the ruddy stems appearing above the small crimson leaves render it a most desirable plant. *Shortia uniflora*, native of Japan, is quite eclipsed by its variety *grandiflora* in size of flower, while its close relative, *S. galacifolia*, from North Carolina, is distinguished by a much larger leaf growth and semi-double flowers. The cultivation of *Shortias* is so far imperfectly understood in this country, but a choice position in a damp, half-shady place seems to suit them very well.

Spring Treatment of Violets.—Plants that were flowered in frames or pits might now reasonably be dispensed with, seeing that those out of doors will be in bloom; besides, the frames will be required for other purposes. If a young stock of plants were not rooted in the autumn, it will be necessary to secure the stock from those just being turned out. These semi-rooted cuttings should be planted at once in a specially prepared border somewhere away from the direct rays of the sun, and kept well watered during hot weather until they are well established. As the spider is very troublesome to Violets, the plants should be sprayed over every

afternoon, and an occasional dusting of soot will also assist in keeping them free, besides acting as a fertiliser.

Malmaison Carnations.—Plants that were potted in the autumn will now be growing freely, and if they were not staked at the time, this should be seen to at once. We have seen fine specimens receive a severe check through delaying this work into the growing season. It breaks up

plants soon cling to the objects against which they are planted, and their orange-coloured, tubular flowers appear in great profusion throughout the summer and autumn. Although a perennial, good results can be obtained by treating it as an annual.

Cocoa-Pods at Kew.—A small tree of *Theobroma Cacao*, the Cocoa Tree of commerce, will prove a source of considerable attraction to visitors at Kew during the Easter holidays. Some 8 feet in height, planted out in one of the beds in the large Palm House, four pods are maturing on the tree. These are 5 inches to 6 inches long and about 3 inches in diameter near the centre, with prominent ribs. The colour at present is light green, this gradually changing to yellow as the fruits mature. Each one, when it bursts, is expected to contain fifty or more seeds.

The Sea Lavenders.—There are several hardy and half-hardy species of *Statice*, either of an annual, biennial or perennial character, that are well worthy of cultivation. The paper-like flowers are of great value in a cut state for winter decoration. Apart from this, they are very decorative when fresh, either in beds or borders, while plants of a dwarf habit are quite suitable for planting on the rockery. They are readily raised from seed, which should be sown now in pots and the seedlings pricked off when large enough. The perennial ones can be increased by division, the present time being suitable.

The Night-Scented Stock.—We would remind readers before it is too late about the charm of the Night-scented Stock, which is our usual English name of the plant signalled by the Latin appellation of *Matthiola bicornis*. We have heard of the Virginian Stock (*Malcolmia maritima*) having been purchased in mistake for the real Simon pure, impossible as it seems to fall into such an error. Every evening and all night long the Night-

scented Stock gives out a delightful incense sort of smell, which never seems to pall upon our olfactory nerves. To those who do not know it, we would say that it should not be planted in a prominent position, as its blooms close up during the daytime and give it a woe-begone appearance. It should be sown where it is to bloom, and the seedlings thinned out to about two inches apart every way. It is a plant for close association with the dwelling-house.



SHORTIA UNIFLORA GRANDIFLORA, AN EXQUISITE ALPINE WITH PINK, FRINGED FLOWERS.

the fine web-like roots, which causes the foliage to become yellow. It will not be advisable to commence feeding these Carnations until the pots are well filled with roots.

A Quick-Growing Climber. For covering tree stumps, walls, fences or unsightly objects, *Eccremocarpus scaber* is very useful. Seeds sown now and the seedlings pricked out when large enough will make good plants for putting out by June. With a little assistance the young

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Galanthus Ikariae.—I have grown this Snow-drop for the last six years on a rockery with a full northern exposure, and have always found it quite satisfactory, both in foliage and flower. On March 27 it was in full bloom. This I regard as one of the best of Snowdrops, coming in as it does so late, and so pure in colour, too. I look upon it as one of the best of spring-flowering bulbs.—E. M., *Hants.*

The Horseshoe Fern.—On page 3 of THE GARDEN for January 3 there is a paragraph on the Horseshoe Fern. The New Zealand Horseshoe Fern is *Marattia fraxinea*. It is called "Horseshoe" because of the peculiar shape of the root, which resembles a hoof. It is very rare, and is only known to grow in the vicinity of Mount Egmont in deep gullies in wet situations. It is a very ornamental evergreen Fern, and has fronds of considerable length. The Kidney Fern is quite

be much more extensively grown. I do not find that its cultivation differs from that given to ordinary Tulips, except that it should have very well-drained soil and a sunny position. It is when the flowers are fully open that their glorious yellow centres are fully revealed, this rich colour contrasting well with the pale cream hue of the upper parts of the segments. The flowers are variable, some being much more heavily marked with carmine on the exterior than others.—A. B. ESSEX. [We publish herewith an illustration of a bed of this beautiful early Tulip, which, as our correspondent states, ought to be more extensively grown.—ED.]

Lachenalias for Baskets.—The excellent reproduction of a pot of these charming spring-flowering plants on page 154, issue March 28, should do a great deal towards extending and improving their cultivation. I would like, however, to draw attention to their usefulness for baskets, for though they are excellent when grown in pots, they are also a beautiful sight when in full flower and suspended from the roof in a cool house just above one's head. The method of growing



THE HIGHLY-COLOURED WATER LILY TULIP (*TULIPA KAUFMANNIANA*).

different, being a *Trichomanes*, as stated in the note.—L. STOWE, *Tiakiwai, Tinakori Road, Wellington, New Zealand.*

The Use of Narcissus Seedlings.—The waste in Daffodil seedling raising is proverbial, but we find the M. J. Berkeley seedlings a notable exception to the rule. For some years we have made a practice of crossing M. J. Berkeley with different forms of *Poeticus*, and even after all the best resulting plants are picked out, the remainder afford excellent decorative material. There is scarcely a flower among them that cannot be made use of, as they have fine long stems and ample foliage. Almost all of them come in useful for vases, and a number make fine garden plants.—F. HERBERT CHAPMAN.

The Water Lily Tulip.—I am sending you a few flowers of this charming Tulip, which is listed in most catalogues under its botanical name of *Tulipa kaufmanniana*. I feel sure that if other readers only knew how beautiful it is during the latter days of March and early in April it would

them in this way is very simple. The wire basket, whatever the size may be, is lined with some long moss, pressed firmly on the bottom and round the sides, say, about half an inch thick. Then commence filling with a compost of fibrous loam and leaf-mould, with a liberal addition of sharp grit and a little finely pulverised sheep-manure. Place about as much soil at the bottom of the basket as there is moss, and lay the bulbs upside down at about four inches apart; then cover with soil and gradually fill the basket, at the same time working the bulbs equidistant around the sides, and finishing off on top with a layer to grow upright, so that the bottom, sides and top will all be furnished. When growth is fairly free, a little liquid manure will considerably assist them to produce strong foliage and flower-spikes, especially if alternated with the addition of some approved fertiliser stirred in the water; but care should be taken not to allow any liquid manure to get in the axils of the leaves, or the young spikes may decay.—SOUTH WALES.

Cistus ladaniferus maculatus.—What a useful plant this is for filling up gaps on a south, east or west wall, where a plant of another kind has suddenly died or is becoming too large for its present position! Plants are easily raised from cuttings inserted in a cold frame in September. If put out in the April following, they quickly grow into stocky plants, and can be planted at any time of the year if lifted carefully with a ball of soil attached to the roots. It is a subject to have always at hand ready for an emergency. The blossoms are fully 4 inches wide, pure white, with a dark blood-coloured blotch on each petal. It is no doubt a sport from *C. ladaniferus*, which was introduced from Spain in 1629.—M.

Lilium nepalense.—In THE GARDEN for March 28, page 159, this Lily is said to have been introduced in 1855 from the Central Himalayas. I am aware that this is the date given in different works for its introduction, but it is described as a white-flowered species, which *L. nepalense*, as we know it, certainly is not. It is very questionable whether *L. nepalense* ever flowered in this country till it reached that stage in the nursery of Messrs. Low, then of Clapton, in the summer of 1888. The bulbs were obtained from Upper Burmah during a military expedition into that country. Quite a *furor* was created on September 11 of the year just named, when this Lily was first shown in public at a meeting of the Royal Horticultural Society. It was unanimously awarded a first-class certificate, and though this honour was more easily gained then than it is now, there is no doubt that it was, in this case, well deserved. In the summer of the following year (1889) Messrs. Low received a similar award for *L. wallichianum superbum*, whose name was after a year or two changed to *L. sulphureum*, and as such it is still largely grown. Under cultivation it has proved to be more robust in constitution than *L. nepalense*. After this, from the same source, Messrs. Low gave us *L. claptonense*, subsequently known as *L. primulinum*, and *L. Lowii*, both of which seem to have dropped out of cultivation.—H. P.

Mertensia Mawsonii.—I wonder if any of your readers can enlighten me as to the name of an exceedingly beautiful *Mertensia* which I have on my rockery labelled as *Mawsonii*? It is a dwarf replica of *Anchusa italica* Dropmore variety, grows no more than 5 inches or 6 inches high, and flowers profusely in the early part of March. Its beautiful relative, *M. echioides*, grows here like a weed on the cool side of the moraine. With regard to your note on page 153 of March 28 issue, I cannot agree for a moment that that delightful little flower, *Chionodoxa sardensis*, is a gentian blue, beautiful though it may be. We are becoming very loose in our application of the term "gentian blue." If it is to be used in describing *Chionodoxa sardensis*, we must invent some other colour description for the Gentians. I am further respectfully at variance with you as to the flowering of this little bulb. I have a few hundreds, planted last autumn, which are vastly superior in flower to my established clumps. If *Chionodoxas* are not at their best in their first season, the inference is that the dealer from whom they were purchased sent out second or third class bulbs.—RAYMOND E. NEGUS, *Walton-on-Thames.* [We do not think the experience of Mr. Negus with *Chionodoxa sardensis* is a common one. We have always found established bulbs of this and *C. Luciliae* to give better flowers than newly planted ones. We should be glad to hear what other readers have to say on the point.—ED.]

Tulip Jenny.—As I write these lines a pot of Tulip Jenny is on a table about two yards away from my desk. I had forgotten it was there until I had been writing about a quarter of an hour. As soon, however, as the room began to get a little warmer, delicious puffs of sweetness came with increasing persistence, as much as to say, "You must notice me." Importunity conquered. I went and buried my nose in its pretty rosy (or, to be accurate, pomegranate purple) blooms. What *was* the scent like? A friend suggested Hawthorn. Hawthorn it undoubtedly is. Here, then, is a good name to describe it by to one's friends—the Hawthorn-scented Tulip. Try it next spring and see if this is not right.—JOSEPH JACOB.

Shading Delicate Seedlings.—Now that the sun has considerable power, it is very essential that delicate seedlings of such things as Begonias and Gloxinias should not be exposed to the full rays thereof. This caution is particularly necessary when the sun is obscured only occasionally by passing clouds, as a few minutes' exposure may do a great deal of mischief. At the same time, the young plants should have as much light as possible in order to encourage a good, sturdy growth. This caution against direct sunshine is particularly necessary when minute seeds are sown and covered with a sheet of glass, as the sun quickly sets up an intense heat under the glass and the germinating seeds are simply roasted.—H. P.

Sparrows Eating Yellow Crocuses.—Writing on this subject on page 143, issue March 21, Miss E. A. Patch states that those who have studied the subject of colour will know that red inspires fear in birds and animals. My experience has been that some birds, blackbirds for instance, have little fear of red fruits. I wish they had. What a lot of trouble and expense might be saved if only the birds, through fear, refrained from attacking our crops of Red Currants, Strawberries and Raspberries! I have had red Tomatoes pecked by birds, not because the latter were suffering from thirst, as the garden was on the bank of a river.—COLIN RUSE.

— I have gathered many hints from THE GARDEN, and am pleased to return one which I thought was well known. An enquiry on this subject was made by Miss E. A. Patch in your issue of March 21, page 143. Thirty years ago sparrows tore and scattered my yellow Crocuses, but I stopped them the following season. For that length of time I have had yellow Crocuses planted in the grass, 1 foot wide, on each side of the drive, 30 yards or more long. Last September I planted nearly two thousand Mammoth Golden Yellow on the edges of the drive, removing all old bulbs, and although they have been flowering in their tens of thousands for the past month, not one of them has been pecked by sparrows, which are very numerous. When the Crocuses grow above the surface of the grass and indicate the position of each, from stout twigs I cut 6-inch lengths and place firmly in the ground, two opposite each other, on each side of the Crocuses. Four feet from these I place another pair, and so on, to the end of the Crocus border. Then I get a reel of ordinary black cotton, fasten the cotton to the outer end twig, take it to the inner twig, and so on, outer and inner to the end; then return the cotton fastened to the reverse twigs, and this gives crossed threads every 4 feet. Neither twigs nor cotton can be seen by the human eye when the flowers appear, but the sparrows can see them and for a time keep entirely from the garden.—W. H. W., *Levenshulme*.

— In the issue of March 21, page 143, Miss Patch in her interesting contribution makes note of the damage done by sparrows eating yellow Crocuses. In this and a neighbouring garden, whether in small clumps or large masses, sparrows made no distinction between colours, treating all alike—white, yellow, to deep purple—tearing the petals to shreds in order to get at the reproductive organs of the flowers. Miss Patch mentions that red inspires fear in birds and animals, while yellow appears attractive. From experience during the past three months, I find fowls eat red Camellia petals as greedily as they would green vegetables, probably owing to their thick, fleshy nature. In the summer they have a like fondness for Rose petals.—S. H., *Stirling, N.B.*

Saxifraga burseriana and its Varieties.—With great interest I have read Mr. Raymond E. Negus' very instructive note on the above (page 143, issue March 21). On one point, however, it has wrought confusion in my mind, viz., what is considered to be "the type," of which Mr. Negus speaks in several places? I always understood the form which occurs on the heights around the City of Trient in the Southern Tyrol (hence tridentina) was S. b. major, while the form found on the Swiss mountains was S. b. minor, the former being of a more loose habit of growth, with larger rosettes and larger flowers; the latter of more compact-growing cushions, with smaller rosettes and smaller flowers. The Swiss form is, moreover, distinct in its deeper-coloured flower-stalks and calyces. These two are very distinct forms; probably, however, only as a consequence of different climatic conditions. The warmer Southern Tyrol would naturally produce in course of time a stronger growth of all parts, and the later flowering period of S. b. minor can be taken as the inheritance of its colder home. But now there is a third form found on the mountains of the Northern Tyrol which keeps the middle of the two in character. In the face of these three distinct forms, varying as they do according to their different homes, it is difficult to judge which of them Mr. Negus means by "the type" of which he speaks. The fact that, as Mr. Negus states, S. b. Gloria "does not come true from seed," coupled with his other statement that his particularly large-flowered specimen—if I understand him aright—bears "two, or possibly three, flowers" on the one stem, would point to the probability of S. b. Gloria being a hybrid, for even twin flowers are extremely rare in either of the species. If it were not for this multiple inflorescence, S. b. Gloria might still be considered as having been selected as a giant variety of the tridentina form, for there are great differences as to size of flowers in the individual plants as they occur in Nature. Some of the petals are so narrow at their bases as to leave open spaces between them similar to S. granulata, while others have rounded petals often overlapping each other. S. b. minor has mostly circular and overlapping petals. Among a batch received last year, there is at present also one in flower with crenated edges to the petals; they are deeply lacerated, almost like a Soldanella. It remains to be seen whether this peculiarity will prove constant.—E. HEINRICH, *Planegg, Bavaria*.

FORTHCOMING EVENTS.

April 15.—Royal Horticultural Society's Meeting and Special Daffodil Show (two days).

April 17.—Huntingdon Daffodil and Spring Flower Show.

HARDY ASIATIC PRIMULAS, NEITHER CHINESE NOR HIMALAYAN.

EXCLUDING the Chinese and Himalayan species of Primula, those from other parts of Asia form a valuable series of hardy flowers. Professor Bayley Balfour treated this section in a masterly manner in his papers at the Primula Conference in 1913, and I have been greatly indebted to him for much information respecting these plants. Professor Balfour reckons some forty species, including microforms, as coming into the area. I have had experience of the following, which together form a most interesting and beautiful collection. I am again following Professor Bayley Balfour's classification.

P. acaulis (Linn., Hill).—It will suffice to remark regarding the ordinary Primula acaulis, our native Primrose, that it is indigenous in Armenia, and that there the type does not differ to any noticeable degree from our own wilding. In North Persia a hairy form called heterochroma is to be found, where it was collected by Polak and Pichler and described by Stapf. It appears to be of little horticultural interest. Of more interest, however, is the other microform of P. acaulis, called P. Sibthorpian (Hoffmannsegg), which is P. acaulis var. rubra (Sibthorp and Smith), the red-flowered Primrose which occurs in the Caucasus and spreads to North Persia, as well as in Greece, and which is considered to be the parent of our red, pink, purple, and blue Primroses. In connection with this it may be mentioned that Miller speaks of the purple Primrose as that of Constantinople, that city probably being the medium of its introduction to European gardens. This plant is frequently called P. amoena, which will be referred to under P. elatior.

P. altaica (Lehmann).—So much confusion exists regarding the name of P. altaica that it would be preferable to abandon its use. The name rightly belongs to a form of P. farinosa, called by Pax P. farinosa subspecies davurica var. intermedia. This is the plant figured as P. intermedia (Sims) in the *Botanical Magazine* for 1809. The nomenclature of P. amoena and P. altaica is rather too intricate to discuss in the space available.

P. algida (Adam).—This is one of the Primulas of the Farinosa section and closely related to the Bird's-eye Primrose, P. farinosa, from which it principally differs by its large spatulate, obtuse, finely toothed leaves, its large corolla of an intense violet colour, and, above all, by its globular capsule, which is longer than the calyx. It is not troublesome to grow in some gardens when established, but some find a difficulty in retaining it. P. algida, of which there are several varieties, is of a bog-loving nature, and likes peat and loam in half shade. It ranges from the Caucasus to Afghanistan and the Altai.

P. amoena (Bieb.).—This, the true P. amoena, differs in its general appearance from P. Sibthorpian, mainly by its possession of a distinct scape. It is to P. Sibthorpian what P. elatior is to P. acaulis. It has, of course, no relation to P. cortusoides amoena of gardens. P. amoena has been cultivated since 1831, but so far as I know it is not at present in cultivation in this country. It is a charming plant and ought to come back—a far better thing than many others that are fancied.

P. auriculata (Lam.).—Like P. algida, the above is widely spread in Asia, and occupies the



PRIMULA ALGIDA, A HARDY SPECIES WITH DEEP VIOLET FLOWERS.

same districts to a great extent. It belongs to the section *Auriculata*, and was figured under the name of *P. longifolia* in the *Botanical Magazine* for 1797, t. 392, while Maund gives a good figure of it under the same name. It has a strong resemblance to the other members of the section, and has long leaves and umbels of rose, violet, or lilac flowers. It likes a cool, moist place in the garden in half shade.

P. Bayernii (Rupr.).—The typical *P. nivalis* is referred to later, but one of its microforms, *P. Bayernii* (Ruprecht) may now be mentioned. It is a pleasing form, which has a distinct mealy toothed beading along the margins of the leaves and white flowers, and the calyx is sometimes greenish purple. This is a good grower in moist soil. It comes from the Caucasus.

P. capitellata (Boiss.).—The true *P. capitellata* (Boissier) is not in commerce, and that of gardens is a variety of *P. auriculata*. It is an easy plant to grow if given a moist soil and similar conditions to those of *P. auriculata*. The true plant has farinose foliage and its flowers crowded in a farinose head of rose or purple flowers.

P. Columnæ (Tenore).—This occurs in the Caucasus and Armenia, and is there a rather rare microform of *P. officinalis*, the Cowslip. It has yellow flowers, and is not of special garden interest. *Primula macrocalyx* (Bunge) is another yellow microform of *P. officinalis*.

P. cortusoides (Linn.).—Apart from the confusion existing through *P. Sieboldii* (E. Morren) being often called *P. cortusoides*, with or without the addition of the word "amœna," the true *P. cortusoides* has often been confounded with *P. saxatilis*. The distinction lies in the fact that *P. cortusoides* has very short pedicels, and *P. saxatilis* very long ones. It is a pleasing plant of the *Cortusoides* section, with rose or red flowers, and with petiolate, lobed leaves. The

only sparsely furnished with farina. It is found over a wide area from the Caucasus and through Turkestan, &c. It requires the same treatment as *P. farinosa*.

P. grandis (Trautv.).—Those who expect to find in *P. grandis* one of the finest of the race, as the name might suggest, will be profoundly disappointed with it. The name is applied on account of the large leaves; but the flowers, which are yellow, are small, narrow-petalled, and wanting in grace and colour effect. They are borne in umbels on tall stems. This species, which belongs to the section *Svedinskya*, is a lover of moisture, and should be planted by the side of a pond or stream. *P. grandis* is a native of the Caucasus.

JOHN MACWATT.
Morelands, Duns.
(To be continued.)

whole plant is more or less covered with a silky pubescence. It is easily grown in common soil.

P. darialica (Ruprecht).—A rare little plant, after the fashion of *P. farinosa*, and a native of the Caucasus. The plants included under the name appear to vary, and this is in accord with Pax's descriptions of the species and its forms. The flowers are rose and the leaves mealy, but sometimes free from farina. Moist soil or pots.

P. elatior (Linn., Hill).—Of the microforms of *P. elatior*, the Oxlip, which occurs in the Caucasus and Armenia, mention may be made of *P. cordifolia*, (Rupr.) and *P. Pallasii* (Lehm.), though not of special garden worth. They are distinguished mainly by the form of the leaves.

P. davurica (Spreng.).—This is a microform of *P. farinosa*, which has rose or rose lilac flowers, and of which there are two or three varieties. The leaves are, however, without or

THE ROCK GARDEN.

THE GREAT HEPATICA.

(ANEMONE ANGULOSA.)

THIS is one of the many spring-flowering Anemones that should be given prominence in the rock garden. The flowers are clear sky blue, like those of the Hepatica (*Anemone Hepatica*), but much larger; there is also a white form, somewhat uncommon, named *alba*. This plant needs a deep, light soil; in cold, damp situations the plants are inclined to lose their foliage. A very effective way of growing Hepaticas in the rock garden is to plant them among creeping Sedums or Mossy Saxifrages, the green carpet adding materially to the effect. They may also be used as an edging to beds of spring flowers or along the margins of woodland walks. This plant is quite often met with under the name of *Hepatica angulosa*. It is perfectly hardy, and may be increased by seed or by division of the roots.

SEDUM PULCHELLUM.

AMONG all the numerous members of the Stonecrop family, I know of no more attractive species than this. It is indeed a most charming plant, possessing all the attributes of a really good rock garden subject, and well worthy of a position on the most select rockeries. It is an evergreen species, producing numerous growths from a central tuft. As these lengthen they very much resemble the



ANEMONE ANGULOSA, A DAINY LITTLE PLANT FOR THE ROCK GARDEN IN SPRING.

young growing shoots of a Spruce Fir, their narrow, pointed leaves being about an inch in length. These, when mature, assume a most beautiful shade of red, and the contrast between these and the young, fresh green growths pushing up from the base gives the whole plant a most delightful appearance. The branches, which are slender and from 3 inches to 6 inches or 8 inches in length, are trailing in habit, but ascending at the tips, upon which are borne the three to five—usually the latter—branched cymes of beautiful rosy purple flowers, arranged closely together in two rows on the upper surface. I may say that frequently flowers are produced from the sides of the branches, but it is more usual for them to be borne only upon the tips. The “arms” of the cyme vary from $1\frac{1}{2}$ inches to $2\frac{1}{2}$ inches in length, although I have known them to measure quite 5 inches—that is, 10 inches from the tip of one arm to the tip of the one opposite—but that is unusual. In outline they bear a marked resemblance to a starfish. Its season of flowering is a long one, a succession of flowering shoots continuing to push up from the base until checked by frost. Its cultivation is of the simplest. Here I have it growing on a rockery in full sun in a compost of loam and limestone chippings in about equal proportions, with a good layer of the latter on the surface.

It grows very rapidly. The rockery upon which it is growing was rebuilt a year ago and six or seven small tufts planted on a ledge behind a stone, and these have developed into a patch about two feet across. Like most Sedums, it is easily propagated. The flower-stems, as they lie upon the ground, emit roots, and the numerous growths which develop along its whole length offer a ready means of increase. J. D. HALLIBURTON.

Botanic Gardens, Bath.

THE ALPINE FLAX.

LINUM ALPINUM, the Alpine Flax, may have few or none of the virtues and utilities of the common Flax, but it has beauties which certainly commend it to the lover of dwarf flowers for the rock garden. This pretty Alpine Flax is of a neat habit of growth—its height is rarely more than from 6 inches to 8 inches, it has light and elegant foliage of the most fairy-like order, while its blooms are of a delightful shade of blue, and, when in bloom in summer, almost cover the plant with their delicate beauty. Nor is it difficult to cultivate, especially when a plant has once become established. It likes a free, open and dry soil, and to be planted in a sunny place. Yet it seems to appreciate a fair amount of moisture in summer; and a good plant in the writer's garden, which has been placed on the lowest terrace of a little rockery, where it receives a good deal of the surplus moisture from above, flourishes excellently and gives a sheet of bloom on its fragile stems. *Linum alpinum* can be raised from seeds, which are best sown at this season under glass and the seedlings pricked off as soon as they can be handled into other pots or boxes about two inches apart and grown on a little before planting out. It can also be increased by dividing established plants in spring. S. A.

DAFFODIL NOTES.

GROUPS AND FLOWERS AT THE ROYAL HORTICULTURAL SOCIETY'S SHOW ON MARCH 24.

(Continued from page 168.)

It is quite unintentional on my part, but I find the three groups which will occupy my attention in these notes have a common denominator, one which, subjectively considered from the putter-up's point of view, is irritating and perplexing; but which, objectively, from the walker-about's standpoint, is sometimes attractive and inviting, and sometimes, using the word in its ancient Tulip sense, bizarre. More difficult far than the most abstruse proposition of our old schooldays' friend, Mr.



NARCISSUS WHITE KNIGHT, A REFINED WHITE-FLOWERED VARIETY. NOTE THE LENGTH OF THE TRUMPET.

Drive-me-mad Euclid, is the problem of how to be original in the display of Daffodil blooms in and on a something that by the necessity of the case might almost be called “a line,” which, as the aforementioned author tells us, is “length without breadth.” The little group of which I am about to write has made the attempt.

For some time past we have been familiar with the flattened crescent of Messrs. Cartwright and Goodwin, with its *Isolepis* clad tier upon tier. Now we have Mr. Bourne and Messrs. Barr and Sons essaying the same hard task. The latter firm gave us a graceful undulation, clothed in the best of taste. It was a fine effort. Mr. Bourne had a more set piece. A half circular tiered stand occupied the middle of his display, at either end a quarter one. The two spaces between were flat, with a large Bamboo vase

raised upon a square pedestal in the centre of each. The idea was ingenious, and is a decided “break”; but the introduction on this occasion of a brown background when all the rest was covered with green seemed to me just to spoil it.

And now for the individual flowers. Beginning with this group of Mr. Bourne's. Here were numerous examples of good standard varieties, the only new one being a very pretty little round white-perianthed *Barrii* with a large Poet-looking eye. It was not named. Then there was *Millie Price*, a nice little pale green-eyed Poet; also *Lemon Belle*, a pale lemon, long vase-shaped variety, which Mr. Bourne tells me does splendidly with him at Bletchley; also *Red Chief*, with its wide, deep orange red rimmed cup, as good in the open as in pots, cheap at its price; also *Cygnets*, the late pale bicolor trumpet, which always looks

effective in a group, possibly because of its clear-cut trumpet. Then there was *Judge Bird*, a large pointed flower of the same section as *Cygnets*; also *White Knight*, to me the very acme of refinement in pure white trumpets, a flower that at its best can, in sporting parlance, show its heels to any other. Fancy this gem being grown in pots! It is still (1914) listed at four guineas; but, remember, last year it was seven.

Among Messrs. Cartwright and Goodwin's flowers three were fine novelties. I write of them in the order in which I would like to have them. First, *Chryse*, a cross between *King Alfred* and a *Campernelle Jonquil*. It might have been the true *Jonquilla odorus Campanelle* seen through a big magnifying-glass. It featured it so much, especially as it bore two blooms on a stem. I do not think I have ever seen anything like it. It gets away from the Buttercup style, with which we are now becoming familiar. Its dimensions are as follow: Diameter of perianth, $3\frac{1}{2}$ inches; length of cup, $1\frac{1}{2}$ inches; diameter of its top, $1\frac{1}{2}$ inches. If I could not have *Chryse*, then give me *Supremacy*, a pale yellow *Ajax*, distinguished by its long, delicate-looking trumpet and its pointed perianth segments. It is a seedling from *King Alfred* crossed with the *Rev. D. R. Williamson*. As it is one of the first of their home-made seedlings, I take the opportunity of congratulating the firm upon their achievement. Measurements: $4\frac{1}{2}$ inches by $1\frac{1}{2}$ inches by $1\frac{1}{2}$ inches (this width only at the very top). Failing these two, I would then go for *Gold Wolf*. This is another *Ajax*, but the very opposite in almost every detail to *Supremacy*. It is

deep yellow in colour, is a round more than a pointed flower, and is decidedly squat-looking, as the measurements of its trumpet will show. Length of same, $1\frac{1}{2}$ inches; width at mouth, 2 inches. We want these differences in general appearance, and of the thick set style this is a good example. *Ivorine*, a great favourite of mine (Section 4), looked very well among some yellows. I also thought *Amphion*, a new buff and orange double, very attractive; perhaps it was owing the similarity of its shape to that of *Argent*.

Now I come to Messrs. Barr and Sons' exhibit. It was beautifully arranged and staged. I doubt if I have ever seen a large group that on the whole I liked better. The pot plants seemed a little discordant, and I wished they had not been there, or, at any rate, had been put at the extreme corner end. There were a goodly quantity of seedlings, all

under numbers, and for the most part only represented by one or two blooms. These it is impossible to describe. Of the named varieties, the following, for one reason or another, deserve honourable mention: Sunrise was before the committee, and received an award for cutting. The yellow ray in each petal which shocked the purists when it first appeared has been "sized up" by the public as one of its charms. It says much for it that every retail firm wants to buy it. Isis is a drooping bloom, which Mr. Rudolph Barr told me came out of the same seed-pod as King George V. and Miss Willmott. It is a sort of pale yellow King George V., which in turn is Miss Willmott made into a better show bloom than it is. Diameter of flower, $3\frac{1}{4}$ inches; diameter of petal, $1\frac{1}{8}$ inches; width of cup, three-quarters of an inch. Messina, which was represented by one perfect bloom, is a borderland plant. Up to now the Poet section has claimed it, and it appears in Messrs. Barr

on. Twenty years back was that was the year of "naughty" Weardale's first public appearance; only "naughty" because it was so dear (*twelve guineas*). "Naughty," as the little boy called the bird which his father had missed after a very easy shot. The bottom of my paper has "cut me off." I am once more before Sensation. It has been grown in pots, and looks well among all the new-comers. A half-crown will buy twelve. A half-crown might be worse spent.

JOSEPH JACOB.

FORSYTHIA SUSPENSА.

In the latter part of March and early April Forsythia suspensa is one of the most beautiful of all hardy shrubs, for at this season its long, drooping branches are wreathed in bright yellow, bell-shaped flowers. It is a shrub that can be depended upon to flower well every spring, and many pretty effects can



FORSYTHIA SUSPENSА OR GOLDEN BELL, ONE OF THE MOST BEAUTIFUL OF EARLY FLOWERING HARDY SHRUBS.

and Sons' 1914 list as such. But I think this is wrong. For one thing, the perianth is not that dead white which is the feature of all others of a true-bred Poet; and, secondly, its early flowering (it came from the open at Penzance) is rather a hint to doubt it *a priori*. The solid orange brick red eye, surrounded by a round, imbricated perianth, give us a very pretty bit of colour; but not, I think, a Poet.

A vase of Sensation brought back old times to my memory. I can remember the days when it ranked high in our estimation. Twenty years ago it was priced at 4s. 6d. each, which, in proportion to the present charges for new varieties, was a high figure. Mme. de Graaff was but £3 and Glory of Leiden a guinea; Gloria Mundi, 30s.; Duchess of Westminster, 4s. 6d.; and so

be obtained by carpeting the surrounding ground with Chionodoxas, Grape Hyacinths or other spring-flowering bulbs. *F. suspensa* is a loose-growing shrub of more or less rambling habit, and it does very well against a wall, railing or fence. It is perhaps seen to the best advantage when grown as large isolated bushes on lawns, or, in a semi-wild part of the garden where the long shoots are not too restricted for space. The bush illustrated on this page is growing in such a position, and here the arching shoots, which are profusely flowered, droop down for 8 feet or more and root into the soil.

Overcrowded shoots should be thinned out after flowering, but one should avoid pruning this shrub like a hedge, which is to deprive it of its truly graceful and drooping habit.

ROSE-GROWING IN TOWN GARDENS.

Standard Roses add greatly to the attractions of a town garden, but they should be employed with moderation, as a too free use of them tends towards formality, which it is generally desirable to avoid. They are useful aids to effect, and enable the gardener to obtain raised and isolated patches of colour at certain spots where it is not convenient or expedient to plant climbers. They have also the advantage that the blooms may be examined with greater ease and without the discomfort of stooping. On the other hand, one cannot expect such good blooms as from dwarf trees, and very rarely is it possible to get them up to exhibition size without hampering the development of the head. Only the most vigorous kinds are suitable for growing as standards, and even with these there is often a large percentage of losses. One frequent cause of this is that Briars are often budded before fibrous roots have formed, and club roots alone will seldom provide a plant with sufficient nourishment after being transplanted. The gardener should make a point of seeing standard trees before buying them, and select only those with plenty of top growth, which will indicate a fair proportion of fibre at the roots.

Tall Weeping Standards are increasing in favour. They make effective ornaments on large lawns, though I think their use is rather to be deprecated in small gardens. I have seen them planted against a closely boarded fence, the growths tied along trellis-work at the top, and with low-growing climbers covering the fence beneath. The arrangement was certainly attractive, but the cost makes one a little chary of recommending it. The choice of varieties in weeping standards is generally limited to the wichuraianas, with which they are usually budded; but Climbing Mrs. Cutbush should make an ideal Rose for the purpose, for it possesses the enormous advantage of being quite perpetual.

Ordinary Full Standards, with stems from $3\frac{1}{2}$ feet to $4\frac{1}{2}$ feet long, are generally employed for planting at intervals around the edges of lawns, and this is perhaps the best use to which they can be put in town gardens. They may also be planted down the centre of beds of other Roses from 4 feet to 6 feet apart; but beds of standards by themselves never look well, and they force upon the onlooker an inevitable comparison of stems, which creates anything but a favourable impression. From their very nature they should be isolated, for grouping only tends to bring out ugly points, which are lost sight of when they are planted with discretion.

For giving additional height to the centre of a bed, half-standards are to be preferred, and stems from $1\frac{1}{2}$ feet to 2 feet long will amply suffice to raise them above the level of suitable companion trees. One frequently hears it stated that some Tea Roses do best on standard stocks, and certainly there are some varieties of spreading habit of growth and with blooms inclined to droop which may be better admired if grown in this way, and, moreover, the flowers will not become splashed from being too close to the ground during heavy rains. But I do not think there are any kinds which actually grow better as standards, unless it be that the gardener has not lightened his soil sufficiently to suit the warmth-loving roots of the Teas. A point of importance

with standards is to keep the stems clean and free from moss, a simple enough matter if the grower will give them an occasional wash with fungicide. It is also most important to protect all cut parts near the base, so as to avoid injury from sawfly larva, and painting with enamel, as recommended in a former article will accomplish this. The two varieties better than all others for standard Roses are Hugh Dickson and Frau Karl Druschki, and, having regard to the difficulty of obtaining really good heads in the average town garden, most growers would do well to rely entirely upon these two sorts. Others which may be grown with fair, if not equal, hopes of success are Mme. Abel Chatenay, Caroline Testout, Mme. Ravary, Lady Ashtown, J. B. Clark, Joseph Hill, Mme. Melanie Soupert and La Tosca. P. L. GODDARD.

A NEW SUNFLOWER. COLOURED PLATE 1491.

AT the great show held in the grounds of Holland House, Kensington, at the commencement of July last, Messrs. Sutton and Sons, Reading, exhibited for the first time a Sunflower, with a rich chestnut red band surrounding the disc. This proved a great attraction to the numerous visitors at that exhibition. On Tuesday, July 29, a large exhibit of the flowers, sent up from the firm's trial grounds at Reading, was staged at the fortnightly meeting held in the Royal Horticultural Society's Hall, Westminster, and gained the distinction of the society's award of merit.

It is a very striking flower, with a broad band of chestnut red round the base of the yellow petals, and is the result of a cross made between *Helianthus annuus* (the common annual yellow sunflower) and *Helianthus lenticularis coronatus* (the common wild Sunflower of North America) by Professor Cockerell of Boulder University, Colorado, who handed over his stock to Messrs. Sutton for development. The cross was made four years ago, and the strain has been under observation since, and is now well fixed. There has been no previous record of this colour in the popular *Helianthus annuus*, which is such a well-known and favourite annual in English gardens. Messrs. Sutton furnish us with the following description of the new sunflower:

"A 'Gaillardia Sunflower' is a very apt description of this brilliant new variety. It is of the true *Helianthus annuus* type, and we do not know a more stately or impressive subject for tall borders. As a dot plant, or grouped in the foreground of shrubberies, it is particularly telling. The plant is of free branching habit, producing numerous well-shaped, dark-centred, brilliant flowers, banded with bright chestnut red, mostly merging to yellow at the tips of the petals. The smaller and medium sized flowers, when cut with long stems, make a unique and magnificent decoration in large vases, and show to great advantage under artificial light.

We are indebted to Messrs. Sutton and Sons for the use of the autochrome from which our coloured plate has been prepared.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

THE FIRST BREAK: STOPPING PLANTS.

JUDGING from the present condition of the plants, there seems to be a good prospect of free and healthy growth, at least during the first half of the Chrysanthemum season. The plants make rapid progress up to the stage when the first bud appears and causes the break. Then they grow more slowly for a couple of weeks or so; this is caused by the check through the formation of the bud. It is natural, and is all

but the earliest sorts, making a natural break in April or early in May, may show another bud early in June. The resultant growth from the second break in June will bear a good bud fit for "taking" in August, and I have found that such crown buds generally appear from August 15 to August 25, and they develop very kindly.

It is necessary to stop some late varieties, else the work of the year would be thrown away. We will take that well-known sort, the Hon. Mrs. Lopes, as an example. If the plants were allowed to grow naturally from the cutting stage, their blooms would be practically useless, having open centres full of seed florets, with about two rows of guard petals. The blooms, such as they would be, would open at the end of November. If, however, the plants are stopped in April, the resultant shoots would bear crown buds from July 25 to August 10, and they would develop into very fine, full blooms, rich in colour and refined in form, about the first week in November.

If we take the old variety Mrs. A. T. Miller, which is a naturally early flowering one, we find the best results from non-stopping; that is, the plant must be allowed to grow in spring until a bud appears—it generally comes during the first half of May—then the resultant shoots are grown on and, in due course, bear the first crown bud, which usually appears early in August—an ideal date for the variety being August 15—but the buds often show quite a week earlier. This cannot be helped, and so everything must be done to retard the development. Although the repotting of the plants does not interfere with the growth, if done at the time the bud shows that causes the first break, it does if carried out when the tops are pinched off the plants. Stopping, therefore, should be done about a week before or a week after the repotting takes place. AVON.



DENDROMECON RIGIDUM, A HARDY TREE POPPY WITH
BRIGHT YELLOW FLOWERS.

A BEAUTIFUL TREE POPPY.

DENDROMECON RIGIDUM.

THE Poppy Order includes many interesting and beautiful garden plants. The genera *Meconopsis* and *Romneya* provide instances of flowers possessing rare and refined beauty. *Dendromecon rigidum* is another example, and if only better known it would be far more extensively grown. It is appropriately termed a Tree Poppy, since the growth is woody and the blossoms are unmistakably

like those of the Poppy tribe. The flowers are bright clear yellow, with two caducous sepals, four petals and numerous stamens; the leaves are lance-shaped. When planted in a light, rich, loamy soil against a sunny wall, it forms a large bush, and produces its flowers in May and early June. Like most other members of the Poppy tribe, this plant is very impatient of root disturbance, and when once established it ought not to be removed. This delightful shrub occurs wild on the summit of the mountains near St. Barbara in North America, and it is interesting to record that between 1831 and 1833 a number of plants were sent home by David Douglas, at that time plant-collector to the Royal Horticultural Society.

I will very briefly explain. If a bud shows on April 15 and it is found that the particular variety does best when topped about that date, then the shoots growing after the natural break will be better than those following the stopping or pinching of the plant on the same date, because the growths following bud formation are always more likely to bear flower-buds at the right time in August.

The very latest varieties will rarely show another bud before the one that appears early in August

like those of the Poppy tribe. The flowers are bright clear yellow, with two caducous sepals, four petals and numerous stamens; the leaves are lance-shaped. When planted in a light, rich, loamy soil against a sunny wall, it forms a large bush, and produces its flowers in May and early June. Like most other members of the Poppy tribe, this plant is very impatient of root disturbance, and when once established it ought not to be removed. This delightful shrub occurs wild on the summit of the mountains near St. Barbara in North America, and it is interesting to record that between 1831 and 1833 a number of plants were sent home by David Douglas, at that time plant-collector to the Royal Horticultural Society.

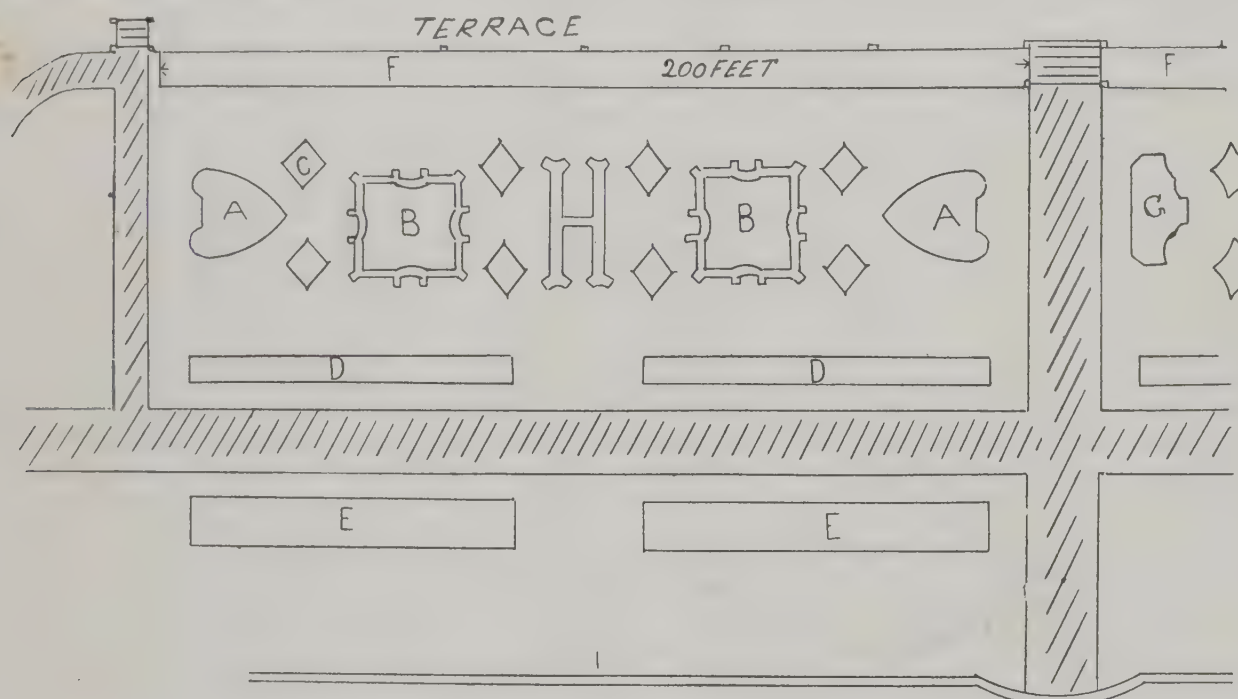
COLOUR EFFECTS IN THE GARDEN.

IN attempting to comply with the request by a correspondent whose note appeared in a recent issue, on colour effects and colour arrangements, I wish it to be understood that in no sense do I claim to be an expert, not even in the sense that Donald Beaton, in the middle period of last century, was allowed to be, though he himself usually attributed his successful efforts in floral arrangements to the good taste of his mistress, Lady Middleton. The people who are successful floral colourists are regarded as the possessors of a natural instinct for colours. In a sense that is, no doubt, true, just as there are people who seem instinctively to mark the points of a sheep or a cow, or as a scholar takes to mathematics or languages.

Some of the prettiest floral effects I have ever seen have been in cottage gardens, and composed of the cheapest material, the efforts of folk whose sole education has been picked up by observation and a few years' experience. But a little plot of

pleasing arrangements, and also those which, otherwise good, are spoiled by some insignificant detail, though no detail is insignificant that spoils a whole. Still, it is often noticeable that an indifferent scheme of colouring is rendered so by perhaps one colour which clashes with or depresses the tone of all the others; and, of course, a note made of that will for all time be a warning. It was just such an inharmonious note in the coloured plate that appeared in the January 3 issue that caused me to pen the few lines which has brought about the writing of this.

The introduction of white weakened the strength of the pink and deeper tones, and the deep blue in the foreground intruded a discordant note which was harsh to a degree. I do not agree that blue should not be used with pink, especially if not a pronounced blue, and, in the scheme in question, had it been placed in the background it would not have been displeasing, even if superfluous. This, it will be observed, relates as much to the proper distribution of colours as to their association, and leads to a brief consideration of methods of distribution which are popular at the present time. In the coloured plate of January 3 the distribution is shown to be in longitudinal lines,



PLAN OF A TERRACE GARDEN ARRANGED FOR COLOUR EFFECT.

garden is manifestly not to be compared with that containing a series of beds and borders, and no one would expect a cottager, however successful in furnishing his own garden, to be able to work out with any degree of success a colour scheme for a gentleman's garden. But the point I wish to emphasise is that no one need despair of success who with all his mind attempts the higher flights.

There is much diversity apparent even among those whose colour sense is largely developed. Some know good colouring, are able to recognise good points and bad ones, distinguish why they are good and bad, and detect inconsistencies which some to whom one would attribute the possession of equal accomplishments fail to detect, though they have the feeling that this is right and that is wrong. Nor can these make anything of details. They usually are copyists of what is good in other people's gardens, and judging from the remarkable similarity to be found in floral arrangements in particular localities, it is obvious that they must form the great majority. Copying, at least to some extent, is perhaps unavoidable; but it is more to be commended in the breach than in the observance. Much better is it to make abundant notes of

a method which has much to recommend it. The *coup d'œil* is harmonious, whether the component parts are kept to separate lines or the colours most nearly approaching each other are mixed together. It is, moreover, possible to employ a great number of colours, not merely those from pink to red, but selected yellows at one side and blues at the other, without lowering the general effect in the slightest degree. It must be obvious how very advantageous this is in gardens of no great extent where variety has to be considered. There are many people who esteem a collection of hardy plants mainly, and in all available colours, as still the most attractive, and in this form, as an adjunct, can be studied to the highest degree and used to the greatest extent. Enough, however, has perhaps been advanced on mixed borders in the series published early in the year.

Equally, if not more, important is the treatment of the strictly geometrical flower garden. Here, there is always the personal equation to be considered, and the likes and dislikes of the individual cannot be disregarded. But where there is a free, or a comparatively free, hand, the problem should be considered whether the

most satisfying scheme be that which divides the colouring into sections with, perhaps, little connection each with each, or a scheme which subordinates the whole to a dominant note. The latter, I am inclined to think, is the more æsthetic. It is not so much a question of variety, whether of colour or of form, in this case as its quality as a reasoned whole. In the plan shown the beds B B are of ornamental stonework raised 3 feet above the level of the lawn. These are furnished permanently with rose-coloured Roses, are carpeted with *Nepeta Mussinii*, and give the keynote to the colour scheme. The other beds this season are to be as follows: A A—each of 800 square feet superficial—isolated masses of deep rose Larkspurs, which attain a height of 6 feet to 7 feet, the interspaces *Verbena venosa*, and a broad rim of dwarf *Ageratum* round the outer portion. The eight small beds (C), tall and dwarf *Ageratums*; the H, cream; the long, narrow beds (D D), intermediate and tall *Antirrhinums* in light pink to carmine pink; E E have a line of *Kniphofia Uvaria* along the edge next the wall (I), and the other portion furnished with intermediate and tall, but mostly tall, *Antirrhinums*, of various shades of yellow, apricot, and a touch of red. F is a mixed border in which stronger colours will be admitted. G, on the other side of the cross walk, will come so far into the scheme, and the chief plants will be tall dark blue Larkspurs, with *Statice sinuata*, mauve, in the interspaces and dwarf *Ageratum*, as in A.

While engaged in writing the foregoing, a note was received from a gardener regarding the planting of a series of eight beds. The letter raises an interesting point. He proposes employing *Verbena venosa*, with Orange King *Antirrhinum* or *Calceolaria amplexicaulis* to brighten it. The first of these two is not suitable; the other would do were it the chief, and the *Verbena* the subsidiary plant. I myself am furnishing a detached border with *Verbena venosa*, a low wall at the back to be clothed with *Nasturtiums* of nasturtium colour, and a line in front of a faint yellow or amber-coloured Snapdragon. Neither will lower the tone of the *Verbena*, but, on the contrary, will enhance it, and thus the *Verbena* will never be other than the chief plant in the scheme. With the *Calceolaria* there would always be a danger of it losing that position. The same thing happens when yellow is associated with a true blue, such as *Salvia patens*, and I have seen a block of the latter spoiled owing to the introduction of a few bright yellow Snapdragons among it. It will be seen that few of the beds above noted have edgings, and that these harmonise with the plants in the other beds. Edgings are by no means essential, and, unless very carefully selected, they are a source of weakness, if no worse, in a general scheme.

In 1913, edgings were more freely used than it is proposed they will be this year. The H was the same cream shade, but A A were a mass of Snapdragon Fire King and *Calceolaria amplexicaulis*, dropping in stature to the edge by the inclusion of *Cuphea strigillosa* and *Chlorophytum elatum*, the dwarf variety with soft yellow variegation down the middle of the leaf. C C were of pink Snapdragons with variegated Ice Plant edging each; D D, grey-blue to true lavender; E E, deep crimson tall *Lobelia* intermixed with common Cornflower, and a narrow edging of *Lobelia Waverley Blue*. There was a line at the furthest edge of the darkest blue Larkspur, but the plants were destroyed when young by game.

Tynninghame, N.B.

R. P. BROTHERSTON.

GARDENING FOR BEGINNERS.

SEASONABLE WORK AMONG ANNUAL FLOWERS.

THE Easter holidays come at a most convenient time this year for lovers of gardening. Among the numerous operations to be attended to at this date are sowing of seeds of annuals and pricking off seedlings, raised from seeds sown in the autumn and under glass



1.—SPRINKLING SEEDS ON FINELY SIFTED SOIL IN A WELL-PREPARED SEED-BOX.

during February and early March, into boxes or transplanting outside.

Sowing Seeds Under Glass.—The weather, whatever it is, will not interfere with the amateur gardener sowing seeds in shallow boxes, pans or pots, as this can be done under cover in a shed or greenhouse. For obvious reasons shallow boxes and pans are preferable to pots, for though we can put ample drainage in the bottom of the pots to compensate for their greater depth, the area of the surface soil for sowing the seeds is comparatively small unless large, clumsy pots are brought into use. A larger area of soil permits of thin sowing, which is most essential, for not only is it a waste of seeds to sow thickly, but seedlings crowded in a small state are soon ruined. A very convenient size for the boxes is 14 inches long, 9 inches wide and 3 inches deep. Old kipper boxes from the fishmongers are very suitable. Should one have only a few seeds of a particular plant, divide a box in half by placing a stick across the centre, and sow two kinds of seeds in one box, taking care to choose sorts which will take about the same time to germinate.



2.—THE SEEDLINGS SHOULD BE PRICKED OFF WHEN LARGE ENOUGH TO HANDLE.

A suitable compost to fill the boxes consists of two parts loamy soil, one part leaf-mould, and one part coarse sand. Pass this through a quarter-inch mesh sieve, using the rough stuff remaining in the sieve to put in the bottom of the boxes for drainage. If the boxes are filled lightly with soil and the surface is then pressed down moderately firmly with a flat board, the soil will be about the right distance from the top. To obviate the necessity for watering the seeds as soon as sown, it is better to water the soil when the boxes are filled, and leave them to drain a few hours before sowing.

The depth to cover the seeds depends on their size. The smallest need only have a slight dusting of fine silver sand. Larger seeds—Asters, for instance—require a thin covering of very finely sifted soil. Where to place the boxes after sowing depends on the convenience of the grower. A shelf in a cool or cold greenhouse, a hot-bed and a cold frame are all suitable. Without even these advantages the beginner need have no qualms; cloches, hand-lights, or a sheet of glass placed over each box is sufficient protection to induce the seeds to germinate quicker, and affords them more protection than is possible outside. To prevent the surface soil drying up rapidly, cover all seeds with paper till germination commences.

Sowing Seeds Outside.

Without going to an endless amount of trouble, as successful transplanting is very difficult, it is necessary to sow the following and other seeds outside in the positions where the plants are to flower: Poppy, Mignonette, Miss Jekyll's Love-in-a-Mist and Larkspurs. On the other hand, most hardy annuals, if the positions in the beds and borders are occupied when the time for sowing seeds arrives, may be sown in prepared seed-beds outside and transplanted later into their permanent positions. Sowing in temporary positions is more convenient in straight, shallow drills, otherwise the sowing may be broadcast, *i.e.*, thinly all over the surface, or, as illustrated, in short lines, which are easier to thin out. Seeds sown outside require just a little more covering with fine soil than those sown in boxes.

Pricking Out or Transplanting Seedlings.

There is work of this kind to do both in boxes under glass and outside. Antirrhinums, Hollyhocks, Pansies, annual Carnations, Delphiniums, Tobacco Plants and other seeds sown in heat under glass in February and early March are ready to prick off. Here, again, the shallow boxes recommended for seed-sowing can be utilised. Each of these with the seedlings pricked off as illustrated will hold from thirty-five to forty small plants. Outside in the beds and borders there are the autumn-sown annuals to thin and transplant. Larkspurs, Poppies, Pot Marigolds and Collinsias may be

mentioned. The illustration below depicts a group of such just ready for attention. As soon as transplanting is done, water the seedlings, unless it is raining. In thinning do not be too drastic at first. It is often better to remove half the first time, and then go over the beds again a fortnight later.

O. A.

DIVIDING PERENNIAL PHLOXES.

WHERE it is intended to divide these Phloxes or make a new plantation, this is perhaps the best time of the year for that work. One hears numerous complaints about Phloxes not doing well, or that they cannot be grown in this place or that. Perhaps in the majority of cases it is not so much the climate that is at fault as the position they occupy in the garden. If they are planted in a border where they will be partially shaded from the fierce rays of the sun and given copious supplies of water during the summer, there need be no fear of failure. Early in April give a good mulching of farm-yard manure, and let it remain on the surface all the season. Where extra fine spikes are required, the shoots may be reduced to three or four



3.—ANNUAL LARKSPURS SOWN IN ROWS IN AN OUTDOOR BORDER. THE SEEDLINGS ARE NOW READY FOR THINNING.

on a plant, but for ordinary decorative purposes this will not be necessary. Cuttings taken off now and rooted in a cold frame will provide a nice show of bloom in the late autumn.

THE HERBACEOUS BORDER.

WHERE planting was not done in the autumn, this work may now be accomplished; indeed, for the more delicate sorts spring planting is preferred. Many of the stronger-growing subjects, such as Senecio, Helianthus and Rudbeckia, will require to be reduced, leaving strong growths from the outside of the group. The border should now be top-dressed with some good turf, manure from spent Mushroom-beds, and a good sprinkling of bone-meal. The utmost care must be exercised in pointing it over, more particularly where bulbs are grown

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Strawberries in Pots.—The ripening of these fruits has been delayed by sunless weather in March, but with lengthening days there should be no difficulty now in keeping up a daily supply. Keep the plants well exposed to the light and examine the pots several times daily. Give frequent supplies of liquid manure, for it is now almost impossible to give them too much water, especially if the pots are fully exposed to the light and air.

Early Peach-House.—The fruits in this house will now have finished stoning and commenced their second swelling. At this stage the night temperature may be raised to 65° without danger, rising to 75° by day with sun-heat. Syringe the foliage twice daily, and shut the ventilators early in the afternoon to secure all possible benefit from sun-heat. If the borders are properly drained, liberal supplies of water should be given, and a dusting of artificial manure may be applied with advantage at alternate waterings.

Vines.—In midseason vineries disbudding will now require careful attention, and should be accomplished while the shoots are in a young state, selecting those with the most promising bunch, at the same time having due regard to the length of the spurs. Admit air with caution, and shut the ventilators as early in the afternoon as is consistent with safety. As time advances and the Vines are growing freely, the shoots should be carefully stopped at the first or second eye beyond the bunch, according to the space available, and this should be done at intervals so that no serious check may take place.

Plants Under Glass.

Fuchsias.—Old plants of Fuchsias which have been dormant through the winter and are now making fresh growth should be pruned and repotted. It is necessary to remove as much of the old soil from the roots as possible, in order to avoid the use of larger pots at the commencement of the season. Young plants which were struck in the autumn or spring should be grown in a temperature of 60° with plenty of atmospheric moisture.

Chrysanthemums.—All late-struck plants should be potted into 6-inch pots as soon as possible. The compost should be moderately dry, so that it may be pressed tightly round the roots. The plants may afterwards be placed in a cold pit and kept close for a few days. Plants which were potted early must be freely ventilated, in order to keep them stocky. Keep a sharp look-out for fly, which must be destroyed at once if present on the plants. Cuttings may still be struck in a close, cool pit, and will make useful decorative plants for November and December; 6-inch pots are the most suitable for this purpose.

Celosia plumosa.—Seeds may now be sown in heat to provide a succession to those sown early in the year. The present sowing should produce well-developed plants for the conservatory during July and August. The early batch of plants may still be grown in a temperature of 60°.

The Flower Garden.

Sweet Peas.—Plants raised in pots will now be ready for planting in their flowering quarters. The ground is very cold and wet at present, but with lengthening days we may hope for better conditions shortly. The ground should be well forked over and a good sprinkling of fine bone-meal applied before the plants are put out. Great care should be taken that the roots are not injured when being transferred from the pots to the bed of soil. Allow ample space between the plants, as nothing will be gained by crowding, and, as soon as the planting is over, the sticks should be carefully placed in position. A sowing may now be made in the open to produce fresh flowers throughout the late summer and autumn.

Summer-Bedding Plants.—As soon as these are of sufficient size, they should be removed to cooler quarters. Lobelia and various dwarf subjects will benefit by being transplanted from the cutting-boxes into shallow frames; 4 inches of fine soil will be sufficient, and the plants should be placed as near the glass as possible. When

they have made good growth and are of suitable size, the lights may be removed during the day in order to harden them off.

Hollies.—The present is the best time to transplant Hollies. If dry weather prevails, the plants should be syringed several times daily and a good mulching provided. Protection from wind should be given, especially for specimen plants.

The Hardy Fruit Garden.

Apricots.—These trees will soon require disbudding, as this should be commenced as soon as the shoots are large enough to hold between the finger and thumb. Commence by removing the back and fore right shoots, then those which are badly placed; but do not remove too many at one time, as this may cause a check and numbers of the fruits will drop. If disbudding is carefully performed, it will reduce the need for hard pruning in the winter. Retain as many well-placed shoots near the base of the tree as possible, but avoid overcrowding. Very little thinning of the fruit should be practised until the stoning period is over, unless in cases where a heavy crop has set.

The Kitchen Garden.

Vegetable Marrows.—Seeds may now be sown in small pots and grown in a slightly heated pit. As soon as they have developed their first rough leaf, they may be potted into 6-inch pots and grown under glass until the time for planting arrives.

Salsify.—This vegetable may be sown about the middle of April in drills 18 inches apart, and thinned to 9 inches between the plants as soon as large enough to handle. Scorzonera may be sown now and treated in the same way.

Asparagus-Beds should be examined, and if the surface has been beaten down by heavy rain, the soil should be very lightly pricked up and a good dressing of agricultural salt applied. There should be no delay in sowing Asparagus seed, and the seedlings should be ready for planting in two years' time. Sow in shallow drills 18 inches apart, and thin the seedlings to 6 inches as soon as large enough to handle.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Onions that were raised in boxes may now be planted out; at least, any time from now till the end of the month. Of late years many private growers prefer sowing the bulk of their Onions in boxes in preference to sowing out of doors, and there is a good deal to be said for this practice where large bulbs are desired. It is generally admitted that transplanted Onions do not suffer so much from the ravages of the maggot as those sown outside. At the same time, where one has to have a supply of small Onions, it is necessary to sow in this way.

Lettuces.—Those that were sown under glass and transplanted into boxes may now be safely planted out on some warm border. It should be remembered that Lettuces require a good, rich soil to produce nice, crisp heads, so that if the ground has not received a liberal dressing of manure earlier in the season, a little short stable litter should be forked in before planting.

Broccoli.—Winter and spring Broccoli should now be sown, although many recommend sowing up till May. In our climate, however, I do not think this is advisable, as we generally find that the April sowing gives the best results. Prick out the seedlings in a prepared bed when large enough to handle, in a similar way to Cabbage, with this difference—that they should have more room between the plants. If one has not sturdy little plants to begin with, they will be sure to suffer during very severe weather.

Egg Plants.—Although not grown extensively for cooking purposes hitherto, I am told these make quite a delicious vegetable. As they are rather tender subjects, the seed should be sown in small pots indoors and the seedlings thinned out; indeed, they may be treated in the same way as Tomatoes. As, however, they are subject to attacks from red spider, see that they are not placed near

Vines or Peaches, otherwise they may cause a good deal of trouble.

Small Salads.—To provide a regular supply of these salads, a start should now be made with a small sowing outside. As the majority of these are surface-rooting plants, care must be taken to keep them well supplied with moisture at the roots.

The Flower Garden.

Linum Provinciale.—This lovely Flax is in habit quite distinct from any of the other varieties of these fine perennials. The stems are quite erect, and taller than *L. Lewisii*, which is inclined to droop. Curiously enough, however, I cannot find it in any of the hardy plant lists I have by me. With us it is certainly the most outstanding plant of its colour (pale blue) in our herbaceous collection. Anyone who should happen to come across it would do well to add it to their collection. It has also the additional merit of blooming almost throughout the season.

Repairing Paths.—Where this was not done earlier, no time should be lost in seeing to this very necessary work. During March the rainfall in some districts was abnormal, so that the drains and traps were severely tested in consequence. Where gravel is used on the paths, it would be advisable to have it passed through a riddle. This will rid it of soil, and assist in destroying weeds and moss. Some will say this is a big task. So it is, but it will pay if one can find time for it. The work, of course, must be done in fine weather.

Stocks and Asters.—The earliest of these will now be ready for pricking off, at least when they attain the third leaf. As soon as they obtain a hold of the soil, remove them to some cool and airy house, as they will not do well in a close atmosphere. There is, however, still time to make a sowing; and should one be favoured with a good autumn, it is just possible this late sowing will produce the finest plants.

Plants Under Glass.

Herbaceous Calceolarias.—As these useful and attractive greenhouse plants become well rooted in their flowering pots, artificial feeding should commence. Calceolarias do not seem to care much for chemicals; indeed, for the most part I would advise using liquid from the byre or stable, which will be found to be as good as any. In addition put a small bag of soot in the water tank; this will be found to be a grand fertiliser. As soon as the flower-spikes appear, they should be staked with neat little sticks, which, if skilfully done, will scarcely be visible. When the flowers begin to open, the house must be shaded on bright days, otherwise the plants are inclined to flag. Artificial feeding should be discontinued when they come into bloom.

Pruning the Myrtle.—Only in very favoured districts in the North can one risk growing this plant out of doors. In the conservatory it is inclined to get somewhat out of hand, and the present time will be suitable to prune back straggling shoots. An opportunity should be taken to give it a thorough cleansing; this is best done with a garden engine when the young growths are about three inches or four inches long. A few cuttings might be inserted in pots, and when rooted I find they make useful plants for furnishing the greenhouse.

Hippeastrums (Amaryllis).—No time should be lost in getting the main batch into heat. If it should be necessary to repot any of the larger bulbs, do so now, using some good loam and charcoal. In most cases, however, top-dressing will be all that is necessary. Plunge them in Cocoanut fibre, and water very sparingly until the flower-spikes appear.

Fruits Under Glass.

Mealy Bug on Vines.—Although the resting period is the proper time to rid the Vines of this dreadful pest, it is surprising how the insects persist in making their appearance even after we had thought we had got rid of them. Still, we must exercise patience and keep working away, and much can be done even now by going over the Vines from time to time with a small camel-hair brush dipped in methylated spirit and just touching the insects, which will at once destroy them.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

BLUE AND RED HYACINTHS.

SOME INTERESTING FACTS.

THROUGH the kindness of Messrs. M. van Waveren and Sons of Hillegom I have enjoyed in my greenhouse last month and this a very considerable collection of single Hyacinths of various shades of blue, pink and red. A bulb of each variety was put into three different sized pots; otherwise in every other detail all were treated exactly alike. They were potted on the same day, placed in the same position to root, and brought at the same time to the greenhouse.

The Best Sized Pots.—My experience, which may be of interest and of some utility to others, is as follows. First, I was rather surprised to find how little difference the size of the pots made. Four-inch or 6-inch brought almost equally good spikes, and even in some extra deep ones, where there was considerably more root room, the difference was but slight. On the whole, I would advise 5-inch pots as being the best and most convenient for first-sized single bulbs. Four-inch pots are quite large enough for second-sized ones.

The Strongest Growers.—Secondly, although according to St. Simon, who published a famous monograph on the Hyacinth in 1668, red was probably the original colour of the flower, I can only say that I liked the red shades the least of all I grew, and that I found them to be decidedly the poorest doers. The strongest and the most pleasing were the pale blues and the pinks. These were without the smallest doubt by far the most popular among the visitors who saw the collection. Pale or light blue varieties have always, I fancy, been favourites, ever since, as I might say, there were Hyacinths. In 1703, in the "Dutch Gardiner" we find only blue ones mentioned (sic): "The Hyacinth, that is handsom must have a clear Porcelain or China Blew, or near a white Colour, great Nails standing round the stalk in a Pyramidal fashion, but running up more Taper-wise." Other shades and colours were in existence, but they were esteemed less choice. At the time of the Hyacinth mania (1733-34), according to a contemporary list of prices, whites must have been quite as popular and as much thought of as pale blues, although the one of highest value was a blue Non Plus Ultra, one bulb of which, with its natural offsets, changed hands at 1,600 guilders (about one hundred and thirty-three pounds). In the Hyacinth catalogue given by St. Simon (1668) blues predominate, both as doubles and singles. Whites come next, then red and rose, and then, a long way off them in numbers, come the single yellows. Hence this date must mark the first beginnings of this colour in the Hyacinth. But all this is of academic interest only. Nice as it is to know just a wee bit of a flower's history, a matter-of-fact public will be thinking, as their eyes run over these lines, of their next bulb order, and they will be wondering what, after all this superfluous steam, I am going to advise them to buy. So no more dipping into the past. Anon to the present.

The Blue Varieties.—Taking the blues first, and according my own special favourites the premier position, I would bracket together for the pale blues, Perle Brilliant, short, loose spike with beautiful large bells, with light blue exteriors and pale mauve insides; Grand Maître, tall

spike, of Dutch china blue; Competitor, late flowering, wide segments, a paler shade of the last; and Potgetier, a lovely pale silvery blue, drooping bells, the whole spike reminding me of a Spruce with snow on its branches. For the dark blues I must put Menelik, very dark, compact spike, each petal has an almost black stripe down its centre and is edged with very rich deep purple; and William III., loose spike, dark blue bells, as equal first. Both are excellent and of quite a different style and shade of colour. The former has a very glossy appearance, while the latter is distinguished by its light-looking spike and whitish eye.

In the Pinks two beauties are Lady Derby, superb shade of soft pink, with a slightly deeper line in the centre of each segment, late flowering, medium-sized spike; and General de Wet, a paler pink, long spike, bells not too crowded, each segment curls back, good doer. Then for a third I must go to Ornament Rose, very pale, waxy-looking bells, compact spike; or to Rose à Merveille, if a still paler shade is desired. This latter I would describe as a cream almost more than a pink, it is so pale. Four Hyacinths of deeper colouring that always seemed to catch my eye were Lord Macaulay, bright rose with paler centre, rather crowded spike, not over long; Queen Wilhelmina, one of my favourite loose spikes, pretty rose pink, curious hook on tip of each petal; Solfatare, cherry colour with whitish eye, spike short, flowers look rather as if they were on stilts—still, with all defects, a most pleasing shade; and King of the Scarlets, most distinct, back of petals vermilion, face rich bright crimson, tips of petals inclined to be green. I have forgotten Garibaldi, for it was long past its best when these notes were taken. On no account must I omit it, for it is a grand extra early of great lasting quality, and, as the lists say, of a glowing carmine.

So ends my selection. I know the varieties are not the ones that everyone would choose. I seem to be attracted to the mid-blues like Grand Maître, Count Andrassy, Competitor and the like, more than to the pale mauves like Czar Peter and Johan. When I go to the pales I like the blue tint in Potgetier, while the long spike of Electra is charming. In pinks my taste seems more normal, and perhaps most of those who have seen my flowers have chosen as I have done. Jacques, with its immense Sprucey-looking spike, is excellent. Of the varieties with pronounced stripes, which somehow always remind me of the Paradise sweets of my childhood, I think Queen Maria Sophia, a very early bloomer, and Fabiola, which is decidedly on the late side, the most pleasing.

JOSEPH JACOB.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment is desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Office: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PROTECTING SAXIFRAGA BURSERIANA (M. J.).—The plant itself is quite hardy, and would require no protection from that point of view. If, however, you wish to preserve its beauty at flowering-time, then a sheet of glass for protection would be best, raising it a few inches above the tuft. The glass should be large enough to cover the entire plant and to prevent the rain driving under to destroy the effect. A mulching of granite chips about the plant would also assist to the same end.

GROUPING LILIUM CANDIDUM AND ANCHUSA (M. M. K. C.).—Such a grouping by way of contrast would look very well, provided both could be had in flower together. If you are only now planting the Anchusa, it is hardly likely that a satisfactory flowering will follow this year, and both plants are better when established. If you employ the Delphinium and white Lupine in addition to the above, the former would have to figure as a front-row plant by reason of its dwarfness. If an edging is desirable, you could not have anything better than the white Pink Mrs. Sinkins, which would be in keeping with the scheme you have already in view.

ALPINES FROM SEEDS (E. H.).—Very few of those you name come absolutely true when raised from seeds. Aster alpinus, Aubrietias, Dianthus, Gentian, Saponaria and others all vary slightly. Happily for the gardener, for progress and for evolution that it is so. Some plants—the first two named are generally good instances—give a great variety of colours when raised from seeds. Some are the veriest weeds, others the finest gems, and the gardener, by discarding the former and propagating the latter, is left with vastly improved strains of each. Plants difficult to improve by cross-breeding are frequently endowed with the inherent attribute of great variability when raised from seeds, and in that way provide a wide range of colour.

TO GROW MOSS BETWEEN PAVEMENT STONES (Artist).—The best way to establish moss between pavement stones is to thoroughly soak the stones and interstices with water; then introduce patches of moss. Keep the moss damped over regularly for a period of several weeks, and in the event of hot, dry weather occurring, shade it lightly and damp the shading material several times a day. These patches will fruit later in the year, and the moss will gradually spread over the desired area. It is not possible to purchase spores to sow. There is no special chemical condition of the soil necessary for the establishment of moss, but it must be permanently moist—that is why moss increases so rapidly during the autumn and early winter.

PENTSTEMON AND ROSE (Burton).—Generally speaking, the hybrid Pentstemons, to which no doubt you are referring, flower more abundantly, though naturally somewhat later, on the cut-back plants. Those left alone flower earlier, but the spikes—and the flowers, usually—are less fine. This state of things is, however, modified by weather conditions, and the plants rarely behave exactly alike in two successive seasons. When cut back, it should be to within 2 inches of the ground, the operation taking place early in March. If the shoot of the Rose is well matured, it may be pruned back to 18 inches from the ground-level, or to any prominent eye or bud at about that point. Should the growth referred to be late made and sappy, good eyes or buds would be scarce at the height mentioned, and such pruning to a foot from the ground would only result in sappy growth again. On the other hand, a well-ripened shoot might be shortened to half its length, and, pegged near the ground, would give a moderately good flower from every prominent eye on the stem.

PLANTING ALPINES (K. H., Cheshire).—During the early spring months quite a large number of alpine may be divided and replanted with hope of success. Generally speaking, early April is a good time for the operation, while established examples may be planted from March to May inclusive. All seedling alpine should be transplanted or transferred to more permanent positions in the spring, the object being to afford the young plants a full season's growth ahead in which to make good specimens. The Dryas and Soldanella could be transplanted at any time; the Anemone seedlings at any moment

when they are on the move. Many alpine are easily raised from seeds, and if you have the necessary patience and convenience for dealing with such things, it would pay you a hundredfold. If you do not possess these essentials, you should buy plants. Seed should first be sown in boxes, pots or pans, and the seedlings pricked off before giving them their permanent positions. Some may be sown in frames, others in drills in the open. The address of Mrs. Lloyd Edwards is Bryn Oerog, near Llangollen, North Wales.

TRANSPLANTING GODETIAS (*Mrs. Walton*).—These do not transplant well, particularly when they have attained to any size. Far better results are obtained when the seeds are sown where required and early thinning resorted to. Both these and Clarkias may be transplanted in their earliest stages if the work is carefully done and the plants watered intelligently. If you desire a good display, it would be better to transplant them into pots when quite young, and from these to the flower-beds where required. The slugs might be disposed of by a dressing of some soil fumigant when the ground is vacant.

STONE DAMAGED BY FROST (*E. F. O.*).—We fear from your description that an unsuitable stone has been employed. Most types of stone harden by exposure, while certain others, no matter how placed, yield to the influences of weather and climate. If we are correct in our surmise, disintegration will continue, particularly in times of frost. A little of this is often advantageous, i.e., sympathetic to vegetable life; but if disintegration is continually going on, or present in large degree, we can only conclude, in the absence of fuller particulars or an examination on the spot, that the stone is itself of too soft a nature. We know of no chemical that will harden it.

TREES AND SHRUBS.

CREeping ARBUTUS (*V. P. V.*).—By *Creeping Arbutus* we presume that *Arctostaphylos Uva-ursi* is meant, or, perhaps, *A. alpina*. The former is the better trailer and has been called *Arbutus*. The most likely firm to apply to for plants is Messrs. James Smith and Sons, Darley Dale, near Matlock. If they do not stock the plant, it is likely that they could procure it.

HEATHER FOR EXAMINATION (*W. B.*).—There was nothing about the specimen of Heather sent for examination to enable us to determine the cause of death. It may be that some fungous disease has attacked the roots; or a root-eating grub, such as the larva of the cockchafer, may have been at work, but there was nothing to betoken the presence of either. Examine the ground and surrounding plants carefully for grubs or fungus mycelium.

TO PRUNE A BAY TREE (*Eglinton*).—The Bay tree may be pruned hard back about the middle of April. If the plant is in a tub and you can arrange to place it in a greenhouse with a close and moist atmosphere for a few weeks, keeping it well syringed two or three times a day, shoots will appear more freely than if the plant is left out of doors. If it is planted out, however, and the weather is dry, the production of new growth may be assisted by syringing two or three times a day.

TO PROPAGATE ERICA CARNEA (*G. K. M.*).—This Erica may be increased by any one of three methods—by seeds, by layers, or by cuttings. Seeds should be gathered when ripe and sown on the surface of pans or boxes made up of sandy peat. Drain the pans or boxes well, then make up to within an inch of the top with coarse compost, over this place half an inch of finely sifted compost pressed level and moderately firm. Sow the seeds thinly over the surface, water by soaking, and put in a shady place in a moist greenhouse. Cover with a sheet of glass and afterwards with paper. The seedlings will appear in about a fortnight. As they grow, gradually remove the glass, and when large enough to handle prick the seedlings off in a prepared bed of sandy peat in a cold frame. Layers may be put down at any time during spring or early summer. Place sandy peat beneath the branches, and weight the branches down by means of stones. They must be left for two years before being taken off as separate plants. Cuttings of young shoots may be made from 1 inch to 1½ inches in length during July and August, and be inserted in pots containing a compost of two parts peat and one part sand, made very firm. The pots must be placed under bell-glasses in a shaded and close frame. Cuttings of the same kind may also be rooted in sandy peat if placed under a handlight in a shady place out of doors. Plants raised from cuttings are usually the most satisfactory of all, but as the cuttings are so small they need very careful handling and must be inserted with great care. They root in from four to six weeks.

THE GREENHOUSE.

INJURY TO ASPIDISTRA (*Homo*).—It is impossible to say what has been damaging your *Aspidistra* from the specimens sent. It may be slugs, which hide in the soil during the day; but can it be through the scratching of cats?

PELARGONIUMS NOT DOING WELL (*Moon*).—The appearance of the foliage of the *Pelargonium* suggests that it has been growing under unfavourable conditions of moisture and temperature. There may also have been an attack of aphides, but the main damage is the result of too moist an atmosphere.

PHYLLOCACTUS NOT DOING WELL (*J. W. M.*).—These further specimens enable us to say there is a fungus allied to the "damping off" fungus growing in the brown part at the base of the stem, though the upper parts are free. No doubt the conditions have been too moist and close for it, and we recommend you to bake the soil before

you plant healthy cuttings in it, and take care that the drainage is ample and overwatering is strenuously avoided.

FEATHERY CHRYSANTHEMUMS (*S. L.*).—The plants make breaks and show crown-buds in just the same way as other sections; but both the varieties—namely, *Jitsujetui* and *Mrs. W. Butters*—do best when left to make natural breaks, and then produce natural shoots. If disbudded at the end of August, the resultant blooms will possess many petals, but short. Do not, therefore, disbud, but let the plants flower naturally; then the sprays will be fluffy and attractive.

GRUBS ON ADIANTUMS (*N. B.*).—The grubs are the larvæ of a weevil about three-eighths of an inch long and much the colour of the soil. They do great damage to roots of various greenhouse plants, and, when they mature, the beetles feed upon the foliage of Ferns and the like, and on shoots of Vine and even on foliage of fruit trees. They are troublesome pests to deal with, but as you are repotting the Ferns it would be best to pick all the larvæ out which are to be found in the pots. They may be killed by pouring a teaspoonful of carbon bisulphide into a hole made in the soil with a piece of stick, closing it again immediately. The weevils hatch in April or May, and when they are about, if the pots are shaken after dark (when the beetles feed) over a piece of paper or cloth, many may be captured and killed by dropping them in hot water or paraffin.

ABOUT CHRYSANTHEMUMS (*J. G.*).—Tobacco water may be used on the foliage as a preventive of the leaf-mining maggot. A tablespoonful to three quarts of water would be a strong enough dose. Quassia extract, used according to the directions given with it, would be better, and petroleum emulsion, violently stirred in water, is also good. A wineglassful to a gallon of water will do. If these mixtures—the last two referred to—are syringed on the leaves once a fortnight, they will prevent the fly laying eggs in the leaves. If the shoots of the plants are stopped, 2 inches being pinched off the end, the flowering of the plants will be delayed a fortnight or so, but the quality of the blooms will not be as good as those on plants not as severely stopped. The best way is to retard the plants and the development of the buds in the autumn. No; it would not be advisable to saturate the potting compost with liquid manure before use. Please send some Sweet Pea plants for inspection.

TREATMENT OF BORONIA MEGASTIGMA (*J. M. B.*).—When the plant has done flowering it should be cut back into a neat, compact shape. Then, if kept in the greenhouse, young shoots would soon be pushed out, and as soon as these are about half an inch in length the plant must be repotted. For this purpose the pot should be a size larger than the old one, quite clean and effectually drained. A suitable potting compost is good fibrous peat and sand. This must be pressed down very firmly, and care taken not to bury the ball of soil deeper than it was before. Seeds are occasionally to be obtained, and when this is the case, they afford a ready means of increase. At the same time, seedlings do not flower in a small state in the same profusion as plants raised from cuttings; hence this latter method is usually employed for their propagation. Cuttings are not at all easy to strike, the most successful method being to dibble them into well-drained pots filled with fine peat and sand, pressed down firmly, and covered with a bell-glass till rooted.

VARIOUS QUESTIONS (*G. A. W.*).—From what you say about your *Rose Maréchal Niel* we imagine that the soil in the bed has become sour. Possibly the bed is not well drained. It may be, however, that improper ventilation, resulting in mildew, is the cause. Should there appear to be signs of mildew, spray the leaves with Bordeaux mixture, which may be procured from a chemist. If the leaves continue to fall, remake the bed, taking care to drain it well at the time. The manure you propose using is quite suitable for a healthy plant, but if the soil is to blame, it will not assist your *Rose*. Perhaps a local expert could be induced to call and examine the condition of your bed. You may repot your *Deutzia* at once, using a compost of four parts good loam to one part each of leaf-mould, well-rotted manure and sand. After flowering, the old flowering shoots should be cut away. Your Ivy-leaved *Geraniums* may be expected to break again quite vigorously from the old wood. Cut the dead ends of the shoots away at once, then keep the plants syringed twice a day until new shoots appear. Your plant of *Plumbago capensis* may be repotted at once, using a compost of two parts fibrous loam to one part of leaf-mould or peat, with a little well-rotted manure and sand. If it has not been pruned, prune the branches back at once. Those formed last year may be removed to within a few buds of the base. It is impossible to say what the worms were which you discovered in your soil, neither can we say whether they are likely to be detrimental to plant growth or not. You cannot do better than cut your *Oleander* well back at once, then keep the branches well syringed until new shoots are formed. You may then repot it in soil similar to that recommended for the *Deutzia*.

ROSE GARDEN.

ROSES BY POST TO AMERICA (*U. S. A.*).—There is considerable difficulty in sending *Roses* to America, as one must obtain a permit from the Agricultural Department at Washington. You might apply to the Board of Agriculture, 4, Whitehall Place, London, W., or ask your nurseryman to get one through for you. Or, if you care to do so, write to some American firm of Rose-growers and ask them to post a plant on to your friend. Doubtless Messrs. H. Dreer and Co. of Philadelphia, Massachusetts, would do this for you.

ROSES INJURED BY PESTS (*Miss D.*).—From your description it looks as though the damage was caused by the leaf-cutter bee, or mason bee as it is called. This pest generally nests in hard gravel walks or in holes in old walls, and may be seen hovering over the *Roses* on a sunny morning. The only remedy is to watch for it and trace it to its nest, which, of course, should be destroyed. Or it may be the *Rose* slugworm caused the damage by eating the surface of the foliage, which, in time, would cause the holes. For this, spray the bushes with nicotine wash or Hellebore wash. You could spray now and continue at frequent intervals through the early summer.

FRUIT GARDEN.

INJURY TO PLUMS (*Reigate*).—Your *Plums* have no doubt been attacked by the leaf-curling aphid. These pests hatch out about the last week in March, and spraying should be done as soon as they can be discovered on the opening buds, using either one of the nicotine sprays or Quassia and soft soap.

FRUIT TREES ATTACKED BY SCAB (*Brockley*).—Your trees are attacked neither by mildew nor by canker, but by scab. The best thing you can do with them is to remove all the dead or dying wood, spurs and the like, and to spray the trees with Bordeaux mixture at half the strength used for spraying Potatoes, beginning just as the buds are ready to burst (but before they open), and repeating at intervals of about three weeks. Take care that the spraying is done when bright sun is not shining upon them. From what you say, we think your *Apple Cox's Orange* must be planted in a draughty place.

KITCHEN GARDEN.

CHINESE ARTICHOKEs (*Valetta*).—To grow these successfully the tubers should be planted at once, 3 inches deep, 6 inches apart and 12 inches from row to row. Choose a south or west aspect. These revel in a light sandy soil, to which plenty of well-decayed leaf-mould should be added. About twelve tubers usually make one good dish.

BROCCOLI DAMAGED BY A FUNGUS (*Isle of Wight*).—The spots on the leaves of the Broccoli are due to a fungus which attacks almost all varieties of the Cabbage tribe, and might be kept in check by spraying with a solution of an ounce of potassium sulphide in three gallons of water when the disease first makes its appearance. It seems too late to do any good now.

FRENCH BEANS (*Valetta*).—Unless proper methods are adopted, the crop would not be very satisfactory at this season of the year. A greenhouse temperature would hardly suit them, as these will require at least 55° to 65° of heat, varying with the outside temperature. The cause of your foliage looking yellow in all probability would be too low a temperature, and most likely the plants too wet at the root; leaf-soil would not be the cause. The pots should be well drained and a light, moderate compost used. The presence of red spider is due to the atmospheric conditions of the house being too dry. This pest cannot thrive in a moist temperature.

MISCELLANEOUS.

POTASH FOR TOMATOES (*W. P.*).—Potash may be applied to *Tomatoes* in the form of sulphate of potash, either by mixing with the soil or by dissolving in water at the rate of half an ounce to the gallon, and watering with it occasionally.

CREOSOTING A FENCE (*E. P.*).—Your neighbour has full right to creosote not only his own side of the fence in question, but your side as well; but he has no right to go upon your land to do so. In other words, if you object to your neighbour going upon your garden for the purpose of creosoting the fence, you must hand over the fence in order to creosote your side, as otherwise he would commit a trespass. Your neighbour would be quite justified in compelling you to remove the posts supporting the wires if same are attached to the fence. Small quantities of creosote touching the bark of a dormant tree would not be likely to do a great deal of harm to it, though it would be deadly to foliage. The danger lies mainly in the fumes affecting tender shoots, as they would be likely to do, and in the possibility of some of the creosote washing down to and affecting the roots. The latter is probably less likely than the former, but fumes would continue to be given off for some time in warm weather. There would be much less danger if the work were done in November than if it were done now.

THE VALUE OF SOOT (*Toxic*).—Perhaps the following information may be of value to you with regard to soot. Its chief manurial value lies in the nitrogen it contains. Soots from short chimneys are usually much richer in nitrogen than from tall ones with a very strong draught. Those from the latter are usually very poor in nitrogen, and contain a considerable amount of ash. Soot is best valued by the amount of nitrogen it contains, and its value varies from about twenty-four shillings to five pounds a ton—the lighter samples being the better. A good soot should give four bushels to the hundredweight and be worth about sixpence a bushel. There is practically no other manurial substance of value in the soot, but it has somewhat greater value in the garden than these figures show. It helps to darken soil, which renders it more absorbent of heat, and its carbon, no doubt, aids in removing toxic substances, just as charcoal does. We regret we cannot carry out analyses for our correspondents. Fellows of the Royal Horticultural Society may get them done at a reduced fee by Dr. A. J. Voelcker of 1, Tudor Street, E.C.

THE GARDEN.

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APRIL 18, 1914.

NOTES OF THE WEEK.

Early Strawberries.—Anyone having a number of plants not required for forcing can have an early supply of fruit outside by planting these in a trench such as one would plant Celery in. The trench should be 4 feet wide by 1 foot deep. In this plant three rows of Strawberries, and when they commence to grow, a few old lights may be placed over them, which will provide the necessary protection. Many fine dishes of excellent fruit we have seen gathered from plants treated in this way.

A Fine Strain of Clivia miniata.—There are at Kew flowering now in the Temperate House and House No. 4 some magnificent varieties of Clivia miniata. The flowers are remarkable for their size, some of the individual flowers being over four inches across, while there are as many as twenty blooms on a single truss or inflorescence. The flowers have broad, overlapping segments of bright orange hue, paling off to yellow at the base. Some of the flowers in shape and in the curvature of the anthers resemble those of the Amaryllis.

The Hoop-Petticoat Daffodil. Some of the diminutive Narcissi are really lovely in the rock garden, but it is doubtful if any of them are so beautifully adapted for associating with choice alpine as the Hoop-Petticoat Daffodil, botanically known as Narcissus Bulbocodium. The flowers of the species are bright yellow, but the variety citrinus, native of the Pyrenees, has sulphur-coloured flowers, which are even more pleasing. The bulbs should be allowed to establish themselves in a light soil and sunny position on the rock garden, as they do not, as a rule, all bloom the first year after planting.

Green Fly on Roses.—Complaints have reached us from several districts about aphides attacking the young shoots of Roses. On making investigations we find the trouble is a serious one, in some instances nearly all the young shoots being badly infested. Of course, the majority of these would be removed at pruning-time, and, let us hope, consigned to the flames. We draw attention to the pest now to put readers on their guard. Steps should be taken at once to spray all bushes wherever there is a possibility of insects being

present, but the insecticide should be used weaker than it would be later on when the foliage is harder.

Sowing Lawn Grass.—Those having lawn grass seed to sow will find the present as good a time as any; but, of course, much will depend on the state of the soil. It is essential that the surface should be got into a very fine state by repeated raking and rolling. As most of the seeds of the finer grasses are very light, the sowing must be done on a calm day, otherwise the seeds would be blown into patches, which is most objectionable. As sparrows and finches are particularly fond of grass seeds, it will be necessary to protect the

6-inch pots. Place a 4-foot stake in each pot and train up the leading shoot, rubbing out all side growths as they appear. Stop the plants at the top of the stake to induce them to form a head. Some time in July they should be plunged out of doors till the autumn. About next February they may be potted into 9-inch or 10-inch pots and brought on gradually. It is not advisable to pinch out the flowers at any stage of their growth; this gives the plants a check. Rather let them grow naturally.

Watering Recently Planted Trees.—Should the weather be hot and dry, all recently planted fruit trees should receive a good soaking. Indeed, if it were possible, one might use the hose for this purpose. This will not only supply moisture, but wash the fine soil among the roots. When this has been done, replace the mulching, and the possibilities are that the trees will not require another watering for some time.

Planting Border Carnations.—If these were potted in the autumn and have wintered in cold frames, no time should be lost in planting them in their permanent quarters. The soil for this purpose should be rich, with a fair quantity of sand among it, and if this was dug early in the year, so much the better, as nothing will be necessary now beyond breaking and levelling the surface. The plants should then be carefully removed from the pots and planted firmly in straight lines at equal distances apart. Frequent dust-

ings of soot may be given with advantage during the growing season.

The Common Dog's-Tooth Violet.—Erythronium Dens-canis is one of the most interesting of hardy plants flowering at the present time. Even when out of bloom it is attractive, the leaves being mottled with a brownish colour. There are a number of beautiful forms, from pure white to dark purple, while some have broader segments. A colony of these is of great interest, and it is surprising that this old-fashioned flower is not made more use of. A peaty soil, with some shade, suits it best, although it grows and flowers satisfactorily in the full sun.



NARCISSUS BULBOCODIUM CITRINUS, A CHARMING VARIETY OF THE HOOP-PETTICOAT DAFFODIL.

plat in some way. If this is not too large, herring-nets can be used. On larger patches black thread may be placed on small twigs run across the ground in various directions. Ordinary lawns should now be swept and rolled, and where the grass is growing freely a start should be made with the mower.

Standard Heliotropes for the Conservatory.—These make a splendid addition to our summer-flowering plants in the conservatory. To those who have not gone in for this style of growing Heliotropes, the present is a very good time to make a start. Select some strong plants that have been grown in pots, and pot on, say, into

CORRESPONDENCE.

(The Editor is not responsible for the opinion expressed by correspondents.)

New Zealand Flax (*Phormium tenax*).—The cultural directions for this valuable plant given in THE GARDEN of April 4, page 176, seem to me somewhat misleading. It is true that it will grow well in "good, loamy soil," but that is by no means essential to its vigour. In its native country, I believe, its natural habitat is on land subject to winter inundation, and on sandy and shingly river banks. In the South-West of Scotland, where it ripens immense quantities of seed, it flourishes rampantly in swampy ground and peaty moorland, where few choice things would survive. The cultivation of it on a commercial scale has been undertaken in that region for the production of fibre of a superior quality.—HERBERT MAXWELL, *Monreith.*

Acacia dealbata.—Reading the correspondence on this subject on page 155, issue March 28, I thought a few words on this beautiful tree from this part would be interesting to readers. We have here in the gardens three large trees; the largest is about 4 feet in girth (6 feet from the ground), 35 feet high and 20 feet through. Two are somewhat sheltered from the north by two Eucalyptus trees, but the best specimen is not sheltered so much. These trees flower about January, that is, following a dry summer. I have known all the flower-buds destroyed on the north side with 6° of frost, while the south side of the tree has bloomed freely. I gathered some beautiful sprays this year. But, apart from its flowers, its silvery grey foliage is quite a feature in itself, being so finely divided and graceful in appearance.—J. J. GRIBBLE, *Penlee, Penzance.*

The Fifty Best Alpines.—Having decided to add a small extension to my rockery, I turned up THE GARDEN for last year's March and April in order to consult the four lists of the fifty best alpines then given, respectively by Mr. S. Arnott, Mr. Reginald Farrer, Mr. William Little and Mr. G. F. Hyland. Each list gives the names and cultural directions of fifty alpines which in the author's opinion are those best suited for a small garden. On examining the lists I find that they comprise 130 different plants—on the face of it a little bewildering; but, on going more closely into the matter, I find that, curiously enough, the names of exactly fifty plants recur in two or more lists. As it occurred to me that those of your readers who, like myself, value the opinion of others might wish to know the names of these fifty plants without being put to the trouble of finding them out for themselves, I enclose details. For cultural directions I must refer readers to the original lists given on pages 115, 151, 187 and 211 of THE GARDEN for 1913. In all four lists appear *Arenaria montana*, *Primula marginata* and *Saxifraga burseriana*. In three lists appear *Androsace lanuginosa*, *Aubrietia* Dr. Mules, *Dianthus alpinus*, *Gentiana acaulis*, *Hepatica angulosa*, *Hypericum reptans*, *Lithospermum prostratum*, *Oxalis enneaphylla*, *Phlox subulata* Nelsonii, *Primula nivalis*, *Saxifraga lingulata* lantoscana, *S. Wallacei*, *Silene Schafta* and *Veronica rupestre*. In two lists appear *Anemone sylvestris*, *Anthemis Aizoon*, *Aquilegia*

glandulosa, *Arenaria balearica*, *Arnebia echioides*, *Aster alpinus*, *Aubrietia Moerheimii*, *Campanula* G. F. Wilson, *C. muralis*, *C. portenschlagiana* major, *Dianthus neglectus*, *Dryas octopetala*, *Erinus alpinus*, *Geranium argenteum*, *G. lancastriense*, *Gypsophila prostrata*, *Haberlea rhodopensis*, *Hutchinsia alpina*, *Iberis sempervirens* Little Gem, *Mertensia primuloides*, *Myosotis rupicola*, *Onosma tauricum*, *Papaver alpinum*, *Phlox canadensis* Laphamii, *Primula clusiana*, *Ramondia Nataliae*, *R. pyrenaica*, *Saponaria ocymoides* splendens, *Saxifraga pyramidalis*, *Sempervivum arachnoideum*, *Silene alpestris*, *Tunica Saxifraga* and *Viola gracilis*.—J. M. STRUOWMAN, *Marlborough Cottage, Sofievej-Hellerup.*

The Kew Flagstaff.—It may interest you to know that the Kew flagstaff was cut within a mile of where this is written, and that a special port had to be cut in the ship in order to allow



RHODODENDRON INTRICATUM, A DWARF SPECIES FROM CHINA. THE FLOWERS ARE LAVENDER BLUE.

it to be got in. I believe a few feet had to be cut off the spar in order to get it into the ship. There is a movement on to send another and bigger spar to replace it. It will probably be 200 feet long if it can be shipped. The necessary trees are here. I noticed a few weeks ago a note in THE GARDEN about flowers visited by humming-birds. We get lots of them here in the summer, and they visit every kind of flower. I have a *Lychnis chalcidonica* just outside my dining-room window which they are very fond of, and have to stand on their heads to get at the middle flowers. They are also very fond of Carnations, Delphiniums, Columbines and Fuchsias. It is very pretty to see them hover motionless (except for their wings, which go too fast to see) in the air outside the window "sitting on nothing," as the children put it.—C. T. HILTON, *Third Avenue, Port Alberni, British Columbia.*

Stone Fruits in Scotland.—The Rev. David R. Williamson writes us as follows from Kirkcaldie Manse, Wigtownshire, on April 3rd: "Owing doubtless chiefly to the mildness of the present spring and the heat of last summer, there is every appearance of an abundant blossom on the stone fruit trees in South-Western Scotland this year. The extremely beautiful and effective *Prunus Pissardii* (the Persian Plum) has been for the last fortnight in luxuriant bloom in the centre of my garden. It has been closely followed by the Almond, whose pale pink flowers are just beginning to expand. Exceedingly promising, from a floral point of view, are such fine Plums as the Victoria, The Czar, Early Rivers' and Denniston's Superb Green Gage; also such varieties of the Cherry as Black Eagle, May Duke, Early Rivers' and Morello, which would be worthy of cultivation if only for their marvellous flowers."

A New Rhododendron for the Rock Garden (*R. intricatum*).—During the last ten to fifteen years our gardens have been enriched with many new species of *Rhododendron* from China. Mr. E. H. Wilson's introductions alone exceed fifty species and varieties, many of which so far have not flowered in this country. Among those which have bloomed, none has proved a greater acquisition to our gardens than *R. intricatum*, the subject of the illustration on this page. For the rockery and alpine garden it is an ideal plant. Mr. Wilson, in his notes on China, describes *R. intricatum* as one of the moorland species, growing 2 feet to 3 feet in height. Being a comparatively slow-growing plant with us, the compact little bushes are still less than a foot in height, though nearly seven years old from cuttings. An evergreen species, the small, oval leaves are a quarter of an inch to a third of an inch long, densely clothed on both surfaces with small, peltate scales, dark green above and a brownish white hue beneath. The dainty lavender blue flowers, each about half an inch across, are borne in clusters of three to five, and are very freely produced. At a little distance away, one of the plants suggests a bunch of Violets. The fact that there are several dwarf species of *Rhododendron* in China allied to *R. intricatum* has, unfortunately, led to some confusion in the names. The subject of this note, when first exhibited by Messrs. James Veitch at the meeting of the Royal Horticultural

Society on April 2, 1907, received a first-class certificate as *R. nigro-punctatum*. It differs from that species, however, in having the flowers in clusters, those of *R. nigro-punctatum* being solitary. A third closely allied species, also with lavender blue flowers, named *R. fastigiatum*, has been recently introduced from China by Mr. G. Forrest. This is readily distinguished from *R. intricatum*, as it has prominent exserted anthers, those of *R. intricatum* being shorter than the corolla. The best means of propagation is by cuttings of partially mature shoots inserted in pots of sandy peat during late summer. For preference plunge the pots in a propagating-pit with a little bottom-heat. The plants illustrated are growing in a well-drained bed of sandy loam, peat and leaf-mould. The flowering season is March and early April. The accompanying photograph was taken on April 4.—A. O.

Corydalis cheilanthifolia.—This pretty plant has given me much pleasure ever since I had it some years ago from the garden of my greatly regretted friend, the late Dr. A. R. Wallace. The deep green, Fern-like foliage is always a joy to see when there is but little well-developed plant life early in March, with the fresh interest of the bright yellow bloom that comes a week or two later. It comes up freely from self-sown seed, but this year, to my great pleasure, it has appeared on both faces of a high wall at a height of from 7 feet to 10 feet above the ground. The wall is of the local sandstone, built less than thirty years ago. How the seed got up to that height on both sides of the wall, and how it can have found lodgment and the little plants nutriment, is a complete and delightful puzzle. The plants in the wall are naturally smaller in foliage, and the proportion of flower to leaf greater, than where they grow on the level or on ordinary rockwork.—G. JEKYLL.

Aster Disease.—I notice a very interesting article on this subject in *THE GARDEN* of March 21 issue, but, while admitting that the course advised there may be a feasible one under certain circumstances, I cannot say that gardeners will derive much benefit or consolation from it. I have carried out some experiments in connection with this tantalising and disastrous disease, and I find that a 2 per cent. to 3 per cent. solution of formalin invariably secures immunity. The method of using this liquid is very simple; the soil of the border is ridged up, then sprayed liberally with the liquid, and the ridges are levelled down roughly so that the fumes may be conserved. The border, however, must be vacant for at least three weeks before plants are placed in the soil, and, if possible, this period should be increased for a week or two. We have used the same solution for the composts in the seed-pan, and for the boxes of soil into which the plants were pricked off. To prevent introduction of the disease with new seeds, we now steep all for fifteen minutes in a very weak solution of formalin, one teaspoonful of the commercial liquid (40 per cent.) in one gallon of soft water, and no trouble is ever experienced. Experimenting with soils and manures, we also find that fresh organic matter or heavy dressings of nitrogenous manure encourage the development of the fungus, and my advice to readers is to plant Asters in soil which is "in good heart," *i.e.*, which is rich, but has not been recently manured.—H. H. A.

Bulbs for Spring Planting Outside.—While no one will gainsay Mr. Arnott's dictum on page 139, issue March 14, that many bulbous-rooted subjects "require to be lifted in late autumn and stored until spring," few, I think, will share his views that the middle of March is a "good time" to plant the Belladonna Lilies, and, among others, the hardiest of the *Alstrœmerias*. By the recommended planting-time the first named, given the shelter of a greenhouse wall or south wall, have in the ordinary course made leaf growth from 6 inches to 12 inches above the ground, and the cultivator cannot keep such a bulb in the dry state for months with impunity. Moreover, as is distinctly pointed out at page 139, the Belladonna Lily is quite hardy in the positions indicated; hence there would appear no legitimate reason for deferring the planting till so late a date. In the case of the *Alstrœmerias*, the growth would be very near the surface in March, while long-established patches might even be well through the soil;

hence one does not see the gain to be derived. On the contrary, assuming that dry bulbs or tubers of those named are employed, there will be an unmistakable loss of all that is of benefit to the future plant—root-fibre and leaf production, for example, which, combined and developed in due season, are essential to bulb growth. With certain plants—the tuberous *Anemones* and *Ranunculi*—little or no harm follows this deferred planting; hence for the sake of expediency, and with a desire to extend a season of flowering more particularly, it is worth pursuing.—E. H. JENKINS.

Lime in the Garden.—In reply to "J. D.," page 143, column 1, taking the last paragraph first, "J. D." would be far better advised to use soot in preference to lime for his lawns. Used now at the rate of 20 bushels (costing 10s.) to 1,400 square yards, he would be agreeably surprised in a fortnight's time. This will destroy moss and many other weeds, besides imparting a beautiful colour to his lawns. With regard to the use of lime for Potatoes, after twelve years' experience I unhesitatingly say that it is one of the finest things that can be used for the prevention of scab. I mean the scab caused by insects, not black scab, which is of fungoid origin. I have used quicklime, covering both the shoot and Potato, without the slightest injury. As to quality, I quote the words of a well-known Scottish authority, who once said to me, "I wouldn't have believed that such Potatoes could be grown out of Scotland."—S. G. SMALLRIDGE, *The Gardens, Battledene, Newbury*.

— With regard to the use of lime for Potatoes, doubtlessly a good many growers are influenced by the fact that in the leaflet issued by the Board of Agriculture on the subject, the application of lime is said to be one of the causes of scab, *i.e.*, the ordinary Potato scab, not black scab. This is an error. Scab is most likely to occur in soils in which the skins of the swelling Potatoes are injured or punctured by stones, grit or similar unyielding bodies in the soil. On land dressed with night soil containing ashes, scab is almost sure to occur, and a belief widely prevalent, that land under Potatoes for the first time is likely to produce a scabby crop, arises from the fact that the thorough working necessary for Potato culture has previously not been necessary, and consequently the land has not such a fine tilth and the tubers are more likely to be abraded in the rough soil. The experiment on which the Board of Agriculture based their theory was carried out in the following manner: Lime was taken on to the land previous to use, and allowed to lie exposed to heavy rains until not only was it slaked, but reduced to a pasty mass—to all intents, mortar. This was applied to part of the field, and the results were what might be expected. The lime set in lumps, and scab was more prevalent in that plot than in the unlimed portion. Freshly slaked lime, applied in spring in powdered form up to three tons per acre, will not be detrimental to any Potato crop, but, besides its chemical action on the manure, will prove a valuable fungicide as well.—F. M. S., *East Yorks*.

FORTHCOMING EVENTS.

April 21.—Royal Horticultural Society's Exhibition and National Auricula and Primula Society's Combined Show at Vincent Square, Westminster. Lincolnshire Daffodil Show.

April 23.—National Rose Society's Spring Show at the Royal Horticultural Society's Hall. Midland Daffodil Show at Birmingham (two days)

THE ENEMIES OF THE NARCISSUS.

NOT very long ago it was written of the Narcissus that it had "but one insect and one disease." Alas! this dictum cannot be accepted at the present time, and it behoves those who grow this beautiful flower—and who does not?—to at once realise the many dangers which beset the path of the cultivator.

The Lesser Narcissus Fly.—The enemies of the Narcissus are many, and the cry, unfortunately, is "still they come." The latest to claim attention is the lesser Narcissus fly (*Eumerus lunulatus*), which would appear to at least rival its greater brother, the Merodon equestris, in its capacity for destruction. The two flies are closely allied in entomological classification, and both eat out the interior of the bulb, resulting, in almost every case, in its complete destruction. In one way the *Eumerus lunulatus* may be less to be dreaded than the larger Narcissus fly, for it does not appear to do what the latter is accredited with doing, namely, lay its eggs, variously stated at sixty or a hundred per fly, each in a separate bulb, but, so far as can be at present ascertained, very many, if, indeed, not all, of its eggs in the one bulb which it first attacks.

But it makes up in thoroughness for what it may lack in other respects, as the following will show: In two bulbs of N. Bernardino just raised were found, respectively, thirty-two and eighty grubs, and in a single bulb of N. Glory of Noordwijk over a hundred; in fact, the bulbs so raised were simply sacks of grubs closely packed. What this would have meant had the grubs been allowed to pass into the pupal state, and issue therefrom later as flies to propagate their species, presents to the imagination a truly appalling picture. Of course, some bulbs raised contained but few larvæ; but, up to the time of writing, some 2,000 have been destroyed, and the process of examination is not yet quite ended. With what serious quickness this pest may increase is shown by the fact that when, two seasons ago, I lifted and replanted my special Narcissus borders, I had none of it. Probably in that year (1912) newly purchased bulbs brought with them the larvæ, which employed their time in the following year for the results of 1914. Very little, if anything, has been known about this fly, so far as its attacks on Narcissi are concerned, although it has appeared in places in the Iris. During the last year only does it appear to have come under observation as an enemy of the Narcissus, when it was detected in the South-West Counties. Doubtless by this time it has made its home in many Narcissus gardens elsewhere, and it behoves everyone interested in the matter to make immediate search, if only to achieve the satisfactory result of finding that the enemy does not exist.

The fly is small, about the size of the common house-fly, so that attempts to catch it with a net would be useless. Like the Merodon equestris, the *Eumerus lunulatus* appears to be a "sunshine fly," for in no case have I found Narcissi growing under the shade of trees, whether planted in grass or otherwise, attacked. The grub is somewhat similar to that of the Merodon equestris, but is rather darker in colour, and is smaller, not exceeding five-sixteenth of an inch. In gardens in which the grubs can now be found, there does not appear to be any alternative to the plan which I am now

pursuing, namely, to have every blank space in a row carefully searched for the remnants of the missing bulb, and also to have every bulb showing distinctly unhealthy foliage lifted for examination. By this means the pest must be so seriously checked that the control of another season may lead to its practical extermination.

Fool's Cray. CHARLES E. SHEA.
(To be continued.)

**PEAT "ROCK" GARDENS.
AN INTERESTING EXPERIMENT.**

SO many people have asked me to give them the results of my experiments with what they are pleased to term my "peatworks," that I now, after having given the experiment a fair trial, set down the history of experiments and their results for the benefit of those who, like myself, are in a peat country or within reach of it.

When I first started cultivating alpiners, I proceeded in the orthodox manner, and duly built rockwork and added moraines and other features; but as my collection of plants increased, I found it difficult to obtain suitable stone without expensive cartage, and I was driven to search for substitutes. My soul abhorred the idea of concrete slabs, and one day, as an experiment, I inserted, in the place of a stone which I had removed, a slab of peat (cut from the top spit of a bog), with the happiest results. It retained the soil in its place, and the plants behind it took kindly to it, and eventually rooted into it. Next year, to the stone problem was added the soil problem. My gardener strongly objected to the constant removal of the best of his kitchen garden soil for the nourishment of my alpiners, and I ventured upon a further experiment—I made a "rockwork" entirely of peat, using large blocks—cut from the top spit of the bog—instead of stones, and filling up the pockets, some with loose peat, others with peat and sand, peat and loam, and peat and leaf-mould.

My friends were critical and sceptical. I was told that even if the plants survived, which was more than doubtful, it was quite certain that my peatwork would subside before the winter rains and frosts had passed away. But I am glad to say that these gloomy prognostications have not been fulfilled; the plants have thriven, and, after three winters' rain (our rainfall is somewhere under 40 inches), the peatwork has sunk very little, even less, I fancy, than some of the loam and stone banks, and I am more than pleased with it. Encouraged by this success, I made last year two similar, but larger, peatworks, and I hear that some of my friends are now following my example.

In order to arrest, if possible, the storm of indignation that this innovation might raise among the orthodox rock gardeners, let me say at once that I do not for a moment suggest that peat should become the universal material for "rockwork" construction; but for those—and they are very many—who, like myself, are within reach of a peat-producing district, it has several advantages. It is cheap to buy, easy to work, makes a splendid background for plants, keeps remarkably free from weeds, and, as I will relate, has proved an excellent material for growing alpiners in, and I think I may fairly claim from my experience that, at any rate, it is a very useful alternative to soil and stones. I will first give

various reasons, had to be built up against a high wall (some 10 feet high). I first banked up against the wall rubbish drawn from the garden—turves, rubble, &c.—and placed about eighteen inches of rough drainage stones on top. I then covered this pile with loose peat at least 2 feet deep, stamping it down firmly as it was shovelled up. This stamping is important; it prevents undue "sinking." I then found I had a bank of peat up against the wall some 8 feet to 9 feet high and sloping fairly abruptly from the wall to the ground-level (the wall faces south-east). The north-east side of this heap was then faced with large clods of peat, making it into abrupt cliffs or terraces with occasional bays and pockets, using the clods of peat exactly as if they were blocks of stone, and packing the spaces and crevices with loose peat. This cliff face extends to the end of the loose peat heap, and then projects to the east, about fifteen feet, like a long "nose." This nose is sheer on both sides, and is only some 3 feet thick at the top. The loose peat on the south-west side of this cliff was shovelled up against the cliff until it was level with the top of the cliff, and the loose heap was then contained by the wall on one side and the cliff on another. The heap was finally gradually sloped down on the other sides to the ground-level by the insertion of retaining blocks of peat here and there, forming descending terraces. The pockets and slopes were then levelled up with loose peat, or peat plus the other ingredients mentioned, and I proceeded to plant.

Now as to the plants, my idea being only to thoroughly test peat as a soil substitute for alpiners, there are plants of all sorts and sizes upon this peatwork, placed indiscriminately, with very little regard to effect. It needed some courage, in view of my friends' prognostications, to entrust one's treasures to the experiment; but I hardened my heart, and as far as was possible placed specimens of everything I had upon it.

Let us walk round the peatwork, noting the plants as we go. We start at the north-east side. Here the peat cliffs are nearly ten feet high and fairly abrupt. High up, the heights are crowded with Maples and Azaleas. A little lower on the face and from the chinks sprout



▲ CATKIN-BEARING SPRAY OF ALNUS OREGONA, THE MOST BEAUTIFUL OF ALL THE ALDERS HARDY IN THIS COUNTRY.

some idea of the form and construction of the original peatwork, and will then give a list of some of the plants growing upon it.

My rock garden has no pretensions to architectural beauty. I started with a small piece, and as the necessity for further space arose I built all round it. If I could pull it all down and start afresh, no doubt I should evolve something very different. The original peatwork, for

Hepaticas, Arenaria montana, Myosotis Welwitschei, M. pyrenaica, M. pygmaea, and Mossy Saxifrages everywhere. Lower down, in pockets of peat, sand and leaf-mould, Saxifraga mutata, S. Lyallii, S. mertensiana, S. Fortunei, S. brunoni-ana, and some dwarf Gaultherias. Saxifraga aspera and Boykinia occidentalis hang over the edge. Then Shortia galacifolia, Viola septentrionalis, Sanguinaria canadense, Jeffersonia

diphylla, *Viola glabella*, *Erythronium*, *Ourisia coccinea*, *O. macrophylla*, *Orobis cyaneus*, *Houstonia serpyllifolia*, *Wahlenbergia saxicola*, *W. gracilis*, *Goodyera Menziesii*, *Campanula pulla*, *C. Stansfieldii*, *Castilleja acuminata*, *Polygalas*, *Ramondias* and *Haberleas*; and all over the cliffs *Primula capitata* and *P. cockburniana*, and others, such as *P. Unique* and *P. angustidens* at the base.

Coming round the east and south-east sides of the "nose," we see *Oxalis adenophylla*, *O. enneaphylla*, *Myosotis rupicola*, *M. antarctica*, *Lithospermum prostratum*, *L. intermedium*, *L. Zollingieri*, *L. rosmarinifolium*, *L. Froelichii*, *Pellaea densa*, *Campanula muralis*, *C. garganica*, *Potentilla ambigua* and *P. Tonguei*. Then upon the south and south-west slopes and pockets Mossy Saxifrages at foot, *Viola gracilis*, *V. bosniaca*, *Saxifraga integrifolia*, *S. erioblasta*, *S. reflexa*, *Iris*, *Campanula pulloides*, *Oenotheras*, *Nierembergia rivularis*, *N. frutescens*, *Azaleas*, *Aquilegias*, *Gentians*, *Anemone blanda*, *A. multifida*, *Veronicas*, *Phloxes*, *Convolvulus althæoides*, *Daphne Cneorum*, *Codonopsis ovata*, *Tulipa kaufmanniana*, *Arnebia echioides*, *Mertensias* and many others.

On the newer portions of the peatworks are others—too numerous to mention here—on trial, some of which it is as yet too early to speak of with any authority. But my experience so far leads me to believe that there are comparatively few plants that will not succeed in peat, and some—not necessarily "lime haters"—do better in it with me than in any other soil. I have hitherto always lost *Nierembergia frutescens* in loam, and it has thriven and passed through three winters in peat. *Gentiana verna* and *Codonopsis ovata* I have never had so fine in loam. I must confess that I have not as yet tried the *Kabschia Saxifrages* or such inveterate heat-lovers as *Acantholimon*, but practically everything else in my collection is now in peat on trial, and the only failures I can chronicle are *Gentiana acaulis*, which exists, but turns yellow, and *Sphæralcea munroana*, which is a heat-lover and dies in the winter wherever I put it. I will try some of the *Onosmas* and *Æthionemas* in a pocket strongly diluted with sand just for the sake of the experiment, but we get hardly sufficient winter sun for them in the moraine, so I am not sanguine of success. But all alpine which are not inveterate drought-lovers I shall plant in peat with confidence.

I confess that I am surprised at these results. I had slight hopes that difficult and delicate plants would survive. It may be that peat, though moist, does not clog the roots in winter and retains its moisture in the summer, and so assists the plants growing in it in the same manner as the stone chips do in a moraine. Anyhow, as far as this place is concerned, the experiment has proved more than satisfactory, and if any of your readers care to try a similar experiment, I should be happy to assist them in any way I could. I note in M. Correvo's latest work that he is trying difficult plants in peat beds sunk in concrete tanks with artificial irrigation. In our damp climate such an arrangement is, of course, unnecessary. The list of plants I have given is far from complete; but I would, of course, give a complete list of those tried and on trial if it were so desired.

MURRAY HORNIBROOK.

Knapton, Abbey Leda, Ireland.

SOME UNCOMMON ALDERS

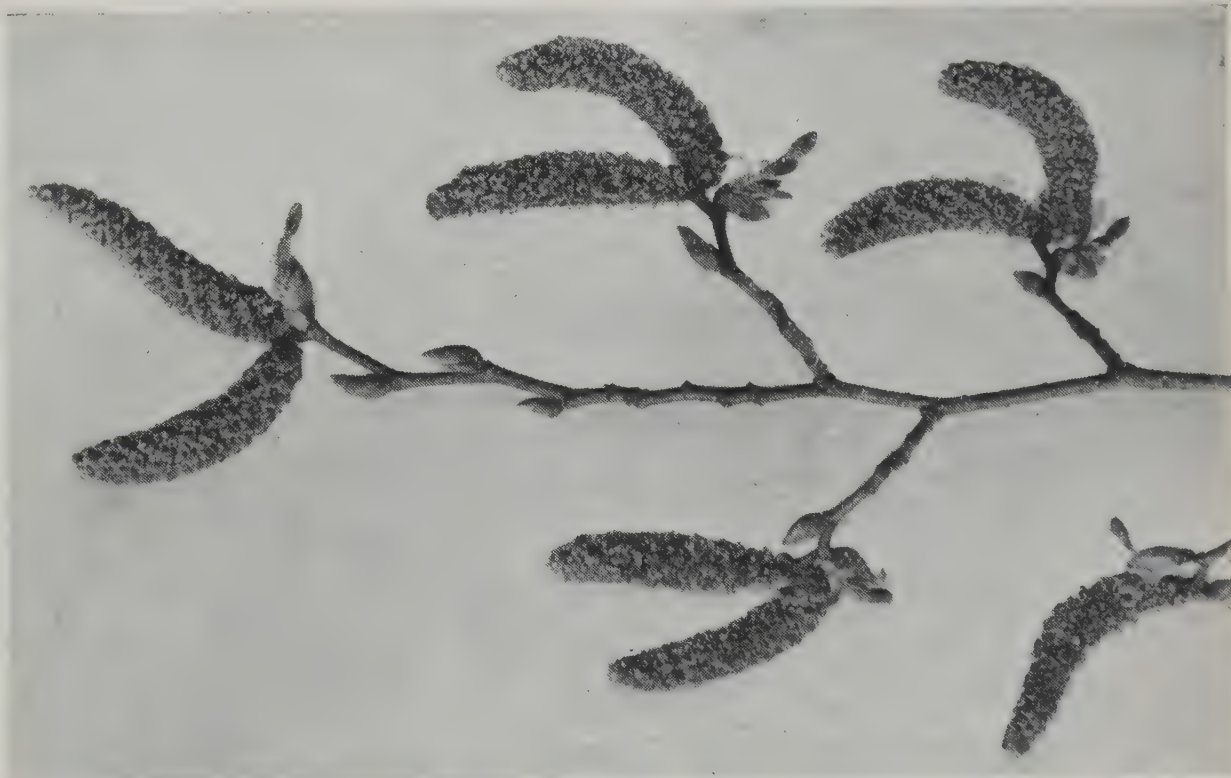
THE Alders belong to the widely distributed genus *Alnus*, comprising deciduous trees and shrubs, natives of Europe, America, North Africa and Asia. There are about twenty-five or twenty-six species, but probably less than twenty of these are in cultivation. In addition to these there are fully as many named varieties, principally of the two common species, *Alnus glutinosa* and *A. incana*. There are also two hybrids, *A. elliptica* (*cordifolia* × *glutinosa*) and *A. Spæthii*. With one or two exceptions, notably *A. maritima* and *A. nitida*, the Alders flower early in the year, either in advance of the leaves or as they develop. The trees, laden with the pendent male catkins, brighten up the landscape, heralding the approach of warmer weather. These, with the female flowers in close proximity, are borne in clusters at the ends of the thin terminal and lateral shoots.

Our common Alder, *A. glutinosa*, is a familiar and attractive tree, growing generally in wet

the species. They are usually borne in pairs, occasionally singly, rarely in clusters of three together, greenish yellow in colour. No other Alder has quite the stiff, straight habit noticeable in *A. firma*. Two new *Alnuses*, *A. cremastogyne* and *A. lanata*, are of recent introduction from China. Mr. E. H. Wilson describes the former as a tall, slender tree 80 feet to 100 feet in height. *A. lanata* is distinguished by the woolly character of the young shoots and under sides of the leaves. Two other attractive Asiatic Alders are *A. nitida*, a native of the Western Temperate Himalayas, quite hardy in this country, and *A. japonica*, a Japanese species.

Several varieties of the common Alder have distinctly ornamental leaves, the best being *A. glutinosa imperialis* (*asplenifolia*). In winter the reddish bark of the young twigs is distinctly pleasing in *A. incisa ramulis coccineis*, the tree being still more beautiful in January and February, when the male catkins mature.

The best means of propagating the Alders is from seeds, which, as a rule, are freely produced on the exotic as well as the native species in this



SPRAY OF A JAPANESE ALDER (*ALNUS FIRMA*). THE CATKINS ARE THICK AND RIGID.

and swampy places. Besides differing considerably in foliage in the summer, the male catkins vary greatly in size and other respects on the different species. Several of the exotic species surpass our native ones in this respect; in fact, *A. oregona*, from Western North America, a spray of which is illustrated, is one of, if not the, most beautiful of all the catkin-bearing trees cultivated in this country. At their best during the month of March, the male catkins are 5 inches to 6 inches long, in clusters of three to five, at the ends of the thin, twiggy growths of the previous season. Words cannot adequately describe their beautiful colouring and markings, a combination of red, orange, yellow and green of Oriental beauty. The weight of the large catkins at the ends of the twigs gives the branches a graceful, slightly pendent habit. In its native habitat *A. oregona* attains a height of about forty feet to fifty feet.

A pleasing contrast to the American tree is *A. firma*, the second species illustrated, which is a native of Japan. The catkins are 2 inches to 2½ inches long, and thicker than in most of

country. The varieties are increased by grafting, using small plants of *A. glutinosa* as a stock. For the lakeside and in the pleasure grounds and woodland where the soil is not too dry, the Alders are very attractive trees. Generally speaking, the trees are of moderate dimensions, and in consequence a tree or two may be fittingly planted in gardens of no great size.

A. O.

HARDY ASIATIC PRIMULAS, NEITHER CHINESE NOR HIMALAYAN.

(Continued from page 180.)

P. Juliae (Kusnetzow).—Although only of recent introduction, seeing that it was discovered in 1901, and first flowered in this country in 1911, *P. Juliae* is already highly favoured by all who have grown it. It comes from the Caucasus, and is one of the moisture-loving Primulas; it is quite an easy subject to cultivate. It belongs to the *Vernalis* section of Pay, although Professor

Balfour does not think it should be so placed. It is a very hardy plant, with membranous, rounded-petioled leaves, and a plentiful supply of reddish flowers showing just above the leaves. Cultivation: Any soil and any position seem to suit it, but it does best in good rich soil in shade.

P. Kaufmanniana (Regel).—This has pubescent, petiolate rounded, lobed leaves and scapes bearing a number of rose violet flowers. It comes from Turkestan, and is amenable to the same treatment as *P. cortusoides* and other members of the section *Cortusoides*, to which it belongs.

P. longiflora (All.).—Although recorded from Armenia and the Caucasus, *P. longiflora* is really European in its area. It is a well-known plant in our gardens, and need not be further mentioned at present. Cultivation: The treatment recommended for *P. farinosa* will suit it.

P. luteola (Ruprecht).—Few people are

miserable, and the flowers are always destroyed by frost and rain. It loves shade and moisture. It comes from Layistan and was introduced about 1896. Professor Balfour places this plant in a separate section—that of *Megaseæfolia*—instead of following Pax and including it with the *Carolinella*.

P. nivalis (Pallas). — Pallas' *P. nivalis* has nothing whatever to do with the garden *P. nivalis*, which is correctly only *P. hirsuta nivea*, and is quite a distinct thing from the Asiatic *P. nivalis*. The latter belongs to the *Nivalis* section, and *P. hirsuta* to the *Erythrodosa*. *P. nivalis* and its microforms are widely dispersed, and are found in one or more forms from the Caucasus, Turkestan, Afghanistan and the Himalayas to the Altai and Baikal districts. It is a good grower, with oblong-elliptic, crenate-denticulate leaves, and scapes carrying umbels of purple flowers on short pedicels and with greenish purple calyces. It has a preference for moist places.

GARDEN CACTUS DAHLIAS.

THIS term is applied to those varieties that are noted for their freedom in flowering and their stiff, erect stems, which carry the flowers well above the foliage and thus produce a decorative effect in the garden. The exhibition Cactus Dahlias cannot produce a garden display, for they have to be thinned out in growth and the flowers disbudded to produce huge blooms. Naturally, the stems are not strong enough to support these large flowers, which weigh them down and so destroy the effect in the garden. Some of the best exhibition sorts will, if allowed to develop more naturally, produce a fine effect. I just point this out to show that both exhibition and garden types cannot be grown on the same lines, for one is to produce a mass of flowers for the garden, while the other is to produce large exhibition blooms.

At this season most amateurs are looking through their catalogues, endeavouring to make a selection of varieties for an autumn display. I am afraid catalogues do not help them very much in this respect, for as a rule they are abbreviated copies of the raisers' descriptions. Now, a raiser mostly describes his new varieties very fully and sees them in their best possible colours. After the first season, however, the descriptions get cut down, with the result that they are most difficult to follow. I am also very much afraid the lists copied down at flower shows are very misleading to those amateurs who want a garden display, for as a general rule one only sees the best exhibition sorts, and these are not adapted to the object in view. Again, I am quite sure the majority of Dahlias do not receive the cultural details they require, for it is quite a common sight to see a huge plant tied to a single stake like a bundle of faggots. Under this system the plants cannot be other than unsatisfactory.

Now, to produce plants that will commence to flower in August, or even earlier, it is essential that an early start should be made. The plants

should be purchased in April, when they are well rooted; this enables the cultivator to repot them into 5-inch pots, thereby securing larger and stronger plants; it also prevents them getting checked by being root-bound and starved, and at the same time we have a stronger plant to resist the attacks of slugs. If room is limited in a cool greenhouse, the plants can be relegated to a cold frame, where they grow steadily and sturdily; but they must be protected from frost. Nothing is gained by planting too early, and the last week in May or the first week in June is quite soon enough, according to the district. There are many people who are under the impression that the Dahlia requires a very rich soil; this is not so, as such soils usually produce a mass of soft, succulent growth which does not produce good flowers. Really, a soil that grows good vegetables will make an ideal Dahlia soil. A little decayed manure can be mixed with the soil in the station prior to planting; this will help to conserve the



PRIMULA JULIA, A RARE HARDY SPECIES FROM THE CAUCASUS, WITH REDDISH BLUE FLOWERS.

sufficiently acquainted with the East Caucasus, Turkestan and Daghestan *P. luteola*, which has been cultivated since 1867, and is one of the best of our hardy Primulas. It has leaves of a lanceolate-elliptic shape, obtuse and denticulated, with the blade narrowing into a petiole, the scape rising well above the leaves, and bearing a many-flowered umbel of pale yellow flowers. *P. luteola* is a native of damp places and loves a moist soil, although it is not too fastidious. Cultivation: Moist situation in half shade. Soil rich, with a good deal of leaf-mould

P. megaseæfolia (Boiss.).—This is a very distinct plant, with large, broad, cartilaginous leaves and bearing its flowers in umbels, sometimes one above the other. These are called rose, but they are more properly magenta rose. The colour is not specially acceptable to many, but, as this Primula flowers in the winter, it is an acquisition for a slightly heated greenhouse or a warm district. In the colder parts, if grown in the open, it looks

P. saxatilis (Kom.).—For garden purposes there is little to distinguish *P. saxatilis* from *P. cortusoides*, a point which has already been discussed under *P. cortusoides*. It has been suggested that *P. saxatilis* is only a microform of the last named, and this is possibly correct. *P. saxatilis*, however, as has been previously mentioned, has longer pedicels. It is quite an easy plant to grow in moderately heavy soil, and gives a good supply of its reddish flowers.

P. sibirica (Jacq.).—This has already been considered among the Chinese species, to which reference may be made for further particulars regarding it.

P. Sieboldii.—This also has been previously discussed when writing of the hardy Japanese Primulas, so that it is unnecessary to mention it further. Other sections of hardy Primulas will be dealt with in subsequent articles

Morelands, Duns

JOHN MACWATT.

moisture in the soil, while a small handful of superphosphate of lime scattered in the soil around the plant is helpful in building up a strong plant. Most Dahlias will occupy a space 4 feet square during the season, but it should always be remembered that a Dahlia can be grown in a smaller space if desired; it is only a question of thinning and pruning.

Before planting, the central stake should be firmly driven in the soil and the plant put out with a spade, not a trowel; the latter does not disturb the ground sufficiently. Later in the season each plant should have three or four smaller stakes driven round it, and the plant tied out to each stake; this will admit light, air and sun to every part of the plant, and thus secure that mature growth so essential to the production of good flowers. Now, as to thinning out the growths.

In nearly every case, as far as theactus section is concerned, this thinning out is necessary. Part of the lateral growths should be removed from each main stem, leaving, however, sufficient to make a good, full plant. It requires very little practice to enable the grower to acquire this knowledge. Those who have been in the habit of relying on the single stake in years past should adopt the four-stake system, for I feel sure, if once adopted, they would never return to the old system. If large flowers are required, only one bud should be left to each growth; otherwise, allow all the buds to develop; but partial disbudding of the flowers is desirable in most instances.

As the Dahlia has to make its growth very rapidly, it will occur to every cultivator that, to obtain the necessary food supply, plenty of moisture is required; so during dry spells the Dahlia should receive a good supply of water weekly, which is infinitely preferable to more frequent applications. Liquid manure may be given, but it is not necessary in the majority of cases.

The Question of Varieties is the all-important one, and as far as actual colours are concerned the best varieties are quite a matter of taste; but all should have the correct habit. The following have been selected as some of the best in a large collection: Amos Perry, rich scarlet, 3 feet; Duchess of Sutherland, delicate blush pink, 3 feet; Mrs. Douglas Flemming, pure white, 3½ feet; Glenda, rosy crimson, 3 feet; Conquest, deep crimson, 3 feet; Mrs. Forrester Paton, crimson scarlet, 3 feet; Mrs. Charles Foster, rosy pink, 3½ feet; Richard Box, yellow, 3½ feet; Mary Purrier, crimson scarlet, 3½ feet; Record, yellow, shading to orange red, 4 feet; Sweet Briar, pink, 4 feet; Edith Carter, yellow, tipped rosy carmine; Sportsman, bright scarlet, 4 feet; Millicent, orange carmine, 2½ feet; Sherlock, orange, 3 feet; Johannesburg, amber gold, 4 feet; Lustre, crimson with darker centre; Mauve Queen, mauve, 3 feet; Nellie Riding, crimson, tipped white, 3 feet; White Ensign, 3 feet; Hon. Mrs. Greville, orange yellow, 4 feet; Florrie Wells, rosy crimson, 3 feet; and Vivid, intense scarlet, 3 feet. J. B. RIDING.

THE JAPANESE PLUM. (PRUNUS TRIFLORA.)

ALTHOUGH not very widely known, the Japanese Plum, or *Prunus triflora*, to give it the correct botanical name, is one of the most glorious of all spring-flowering trees. The flowers, which open as the Almond trees are passing out of bloom, are white, and so freely are they produced that the loosely formed sprays are wreathed in bloom to their very tips. The accompanying illustration gives one a very good idea of its manner of growth and flowering; moreover, it clearly emphasises the value of planting early flowering trees with light-coloured flowers against a background of deep green conifers or other dark-foliaged trees.

There are many varieties of the Japanese Plum, and as commercial fruits they are appreciated, but as flowering trees their exceptional beauty appears



THE JAPANESE PLUM (PRUNUS TRIFLORA). THIS IS ONE OF THE MOST CHARMING OF SPRING-FLOWERING TREES.

to have been overlooked. *P. triflora* must not be confused with *P. triloba*, a beautiful wall shrub, the flowers of which in many gardens are now (April 7) just opening; neither must it be confused with the Japanese Cherry (*Prunus Pseudo-cerasus*), a glorious flowering Cherry, popular both in Japan and in this country, and rightly regarded as one of the most beautiful introductions we have had from that land of flowers. *P. triflora* is a native of China, and was probably imported into Japan. Observations of more than usual interest on the Japanese or Cape Plums appeared in THE GARDEN for March 14, page 135, where the writer, Mr. E. A. Bunyard, referring to the adaptability of these fruits to the English climate, says that experiments so far lead to no hope of this possibility.

THE EARLY FLOWERING MAGNOLIAS.

THESE are few families of plants which possess so many admirable features as the genus *Magnolia*, for not only are the flowers of most of the species of an exceedingly attractive character, but the leaves are also handsome, while in many instances the fruits are brightly coloured and showy. Moreover, they bloom with considerable freedom, and many kinds rarely fail to produce a wealth of blossom when the flowering-time comes round.

The species may be divided into two distinct groups by reason of the time of flowering. The first group is made up of those kinds which produce their flowers on leafless branches, and, the second, of the ones which bloom during the summer or after the appearance of the leaves. Perhaps of the two groups the former is the more noticeable, for the flowers open during late March and April, before the majority of spring plants are in flower. They are really better fitted for the Southern than for the Northern Counties, although even in the North some people contrive to obtain good displays of bloom by placing their plants against warm walls.

It must be borne in mind, however, that soil is an important factor towards the well-being of Magnolias. Warm and well-drained, yet naturally moist loam is the best kind to use, while a little peat or leaf-mould placed about the roots is appreciated. Root disturbance must be avoided as far as possible, for the plants are rather impatient of root injury, and often take some considerable time to re-establish after being transplanted. For this reason it is wise to carry out any transplanting operations during very early autumn or late spring, while the ground is warm. Neither is it advisable to do very much pruning. Pruning is not essential to success, and may well be left alone, unless a little shaping or the removal of a broken branch becomes necessary.

Magnolia conspicua, or the Yulan as it is sometimes called,

is one of the most beautiful of the taller-growing kinds. A native of China, it is said to have been introduced about 1789. In the neighbourhood of London numerous fine examples are to be seen in the open ground, where they form bushy-headed trees 20 feet to 40 feet high and as far through. Each year these trees are laden with pure white, fragrant flowers, each one about 4 inches long and 4 inches or 5 inches across. Sometimes the flowers are browned by cold winds or frost; therefore, when a position is being selected, it is wise to bear this in mind and choose a place where shelter from the north and east is available. Although less showy than the Yulan

M. obovata, another Chinese species, demands attention. Forming a spreading bush 8 feet or

so high, it bears showy purple blossoms; but it is as a subject for the hybridist that it is most highly appreciated. Crossed with the Yulan, a race of handsome hybrids has been raised, which bloom with the freedom of *M. conspicua* and grow into bushes 15 feet or 20 feet high. The flowers of the different kinds are stained more or less deeply with purple. Good ones are *superba*, *soulangeana*, *Alexandrina* and *Norbertii*. A fine example of *M. soulangeana* stands near an equally fine specimen of *M. conspicua* in the Azalea Garden at Kew. Even better examples of the last named are to be seen in the gardens at Syon House and Gunnersbury House.

M. Campbellii is a Himalayan species, and one of the most magnificent of all kinds; but, unfortunately, it can only be grown successfully in the mildest parts of the country. In its native country it attains the proportions of a large tree, and examples 30 feet to 40 feet high have been recorded in the British Isles. The flowers are often 9 inches or 10 inches across and rich rose or crimson on the outer side, paler within. They are borne with regularity in the gardens at Abbotsbury Castle in Dorsetshire, in Sir E. Loder's garden at Leonardslee, and in several other places.

M. Lennei is a handsome-flowered hybrid, its suggested parentage being *M. conspicua* and *M. obovata*; but there appears to be good reason to suppose that the former species and *M. Campbellii* are the parents, for both in size, shape and colour the flowers more strongly resemble those of the Himalayan than of the Chinese species. Moreover, it blossoms several weeks later than the other hybrids previously mentioned. It is a magnificent sort, and should find a place in every Southern garden. *M. rustica* and its form *flore rubra* are presumably of similar parentage, the flowers being large and rich in colour.

M. stellata has been one of our choicest spring-flowering shrubs for the past fifteen or twenty years. A native of Japan, it is usually met with as a shapely bush 4 feet to 8 feet high, but plants are sometimes found exceeding 12 feet in height and 12 feet in diameter. The star-like, glistening white flowers are made up of numerous narrow petals, and they are very fragrant. A pink-flowered form is also known. Except in stature, the Japanese *M. Kobus* has much in common with *M. stellata*, for it is difficult to distinguish the leaves apart, and, except for fewer petals, the flowers are similar in shape and size. It, however, grows into a large tree.

One of the finest new-comers is found in the Chinese and Japanese *M. salicifolia*. This is a free-growing plant which in its native country is said to grow from 15 feet to 20 feet high. Its leaves are rather small and narrow, and the white, fragrant flowers are somewhat after the style of those of *M. stellata*, but rather larger and composed of fewer petals.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Clematis Armandii. A novelty, and an acquisition to boot, and without doubt the finest addition to the genus for many a day. The species has frequently been exhibited previously, but never in the fine condition as on the present occasion. It is hardy, more or less evergreen, early to flower, with axillary clusters of flowers of the purest white. It is a Chinese species, whose merits have been fairly tested prior to being exhibited. From the Hon. Vicary Gibbs, Elstree, Herts.

AWARDS OF MERIT.

Rhododendron fastigiatum.—Miniature bushes were exhibited of this recent novelty from China,

golden yellow, flushed near the edges with bronzy red.

Primula Bookham Gem.—Perhaps the largest of the intermedia or viscosa class yet seen, both flowers and cross presenting a very handsome appearance. The violet colour is rendered conspicuous by a pure white eye. These came from Mr. James Douglas, Great Bookham, Surrey.

Columnnea glabra major.—A beautiful old-fashioned greenhouse flowering plant of trailing habit belonging to the Gesneraceæ. The smooth, shining leaves are an inch or so long and somewhat fleshy in texture, the brownish stems being of a like texture. The flowers are brilliant scarlet, and appear in the axils of the leaves at the ends of the branches. Admirably adapted for basket decoration in the greenhouse. From Elizabeth Lady Lawrence, Dorking.

Anthurium conchiflorum.—This very striking hybrid resulted from a cross between *A. scherzerianum* and *A. chamberlainianum*, the former being the seed parent. Judged by the large, handsome foliage, many might have suggested *A. andreanum* as one parent, though we are informed the seed parent was an exceptionally strong variety of the species named. The brilliantly coloured spathes are of crimson scarlet, with upturned sides, which, we imagine, suggested the above name. Sent by Lady Lawrence, Dorking.

Osmanthus Delavayi.—A small-growing, delightfully fragrant evergreen hardy shrub, whose pure white, starry, Bouvardia-like blossoms are freely produced in axillary and terminal clusters. The dark green entire leaves are an inch or so long, and have obscurely crenated margins. Altogether a delightful plant, whose fragrance alone will assuredly render it popular with all. From the Hon. Vicary Gibbs, Elstree. This beautiful flowering shrub was illustrated in THE GARDEN of April 15, 1911.

Prunus Pissardii blirieana flore pleno.—An unfortunately overwhelming number of names to a very beautiful plant, which is quite distinct from the double form of the type. The foliage is of deep bronzy hue, the semi-double

flowers of a warm Apple blossom pink. Shown by Mr. R. C. Notcutt, Woodbridge.

NEW ORCHIDS.

Two first-class certificates were granted, one to *Cattleya Tityus* The Shrubbery Variety, shown by F. Menteith Ogilvie, Esq., and the other an exquisite *Odontoglossum* hybrid from Lieutenant-Colonel Sir George Holford's collection. Two *Odontiodas* gained awards of merit, one from Mrs. Norman Cookson named Clive, and the other from M. H. Graire, 5, Rue St. Fuscien, named *graireana splendens*.

The Daffodils to receive awards of merit will be referred to in the Rev. Joseph Jacob's notes next week. The foregoing plants were shown on April 7 before the Royal Horticultural Society.



MAGNOLIA SALICIFOLIA, A NEW SPECIES FROM CHINA AND JAPAN, NOW FLOWERING AT KEW.

whence seeds were sent by Mr. E. H. Wilson. The plants, of 6 inches or so high, were just loaded with violet blue trusses of flowers, which have brownish anthers. The plants shown were from three to five years old from the sowing of the seed. A large bush of it would be most effective in the rock garden. Exhibited by Mr. G. Reuthe, Keston, Kent.

Rose Constance.—A high-class novelty belonging to the pernetiana set, and raised by M. J. Pernet-Ducher. The flower-buds are of exceptional length, rich yellow in colour, the outer petals just touched with red. The foliage is handsome and shining, the wood heavily beset with spines. From Messrs. Beckwith and Sons, Hoddesdon.

Auricula Gordon Douglas.—A very handsome fancy sort with perfectly formed flowers of a rich

GARDENING FOR BEGINNERS.

THE AUCUBA: ITS CULTIVATION AND PROPAGATION.

there is one evergreen shrub more prominent than others as particularly adapted for cultivation in confined town and suburban gardens, it is the



—LARGE CUTTINGS MAKE USEFUL PLANTS AS SOON AS THEY ARE ROOTED. THE CUTTING SHOWN ON THE LEFT HAS ALREADY PRODUCED ROOTS.

Aucuba. A native of Japan, *A. japonica* has been cultivated in British gardens for about one hundred and thirty years. In growth, size and colour of the leaves it is a very variable shrub. The numerous forms of Aucuba have been given varietal names by nurserymen, and it would not be difficult, should one wish it, to obtain a collection of at least twenty named sorts. In habit the plants vary from 2 feet to 10 feet in height. There is a very marked difference in the size and colouring of the leaves. Some flowers prefer the large, shiny pale green leaves beautifully spotted with yellow; others choose the rich, shiny green leaves, suggestive of the laurel. In some sorts the edges of the leaves are entire, while in others they are elegantly toothed. It seems difficult to believe, but it is a fact, that this Japanese shrub thrives better in the smoky atmosphere of our large towns than our own native evergreen shrubs. Shade does not harm the Aucuba; it will thrive under all trees as well as the Ivy. Such a good-natured plant is the Aucuba that, in addition to thriving in most positions, it will also grow in nearly all soils. The Aucuba makes a beautiful and attractive lawn specimen; it is also useful as a screen, and an ideal subject for the shrubbery border. Thousands are sold in pots annually by nurserymen for window-boxes, and, when too large for pots, transfer them to tubs for the terrace and steps, or plant out in the garden. This Japanese shrub is also interesting, there being two sexes. The male and female flowers are borne on different plants, not like most of our favourite shrubs, both on the same plant. In addition to its attractive foliage, the female Aucuba bears ornamental berries larger than those of the Holly; but to get these one must grow Aucubas of both sexes, as the pollen from the flowers of the male plant is necessary to fertilise those of the female, otherwise no berries are produced.

A considerable trade is done with small Aucuba plants, covered with berries, in pots. These are grown in greenhouses and artificially fertilised, but this is not necessary outside; as long as there are plants of both sexes, the wind will distribute the pollen.

Propagation from Cuttings is the usual and quickest means of increase, though seeds also may be sown. Quite large branches root readily in a close propagating-frame, preferably with a little bottom-heat. One of these, made ready for insertion, is shown in the illustration, and another rooted ready for potting or planting out in the border. Under glass, Aucuba cuttings may be inserted at any time. In the open border October and November is the best time to put in cuttings. In a moist propagating-frame the cuttings will root in any light material—sandy soil, fibre, leaf-mould or coarse sand. By inserting

large shoots such as those illustrated, good plants are available for potting up in two months suitable for use at once in a window-box. The plant illustrated in the pot is a female, with the flowers just setting after pollination. At the side a shoot with berries is shown. Aucubas flower outside during March and early April.

O. R.

NOTES ON VIOLAS.

Uses.—Violas, or Tufted Pansies, are among the most serviceable plants for use as edgings or to fill in spaces round taller specimen plants; they also mass well in small "dot" beds of distinct or harmonised colours on lawns.

Advantages.—Of the many advantages possessed by Violas as garden plants, perhaps the chief one is to be found in their hardihood. Unlike some varieties of the old favourite Pansy, they will stand our winters well, and, commencing to bloom in March, will continue without intermission until well into November, being therefore in season for nine months out of the twelve.

Culture.—When putting out the young plants which have resulted from cuttings, it is well to pinch out the tops to induce bushiness, and to keep the buds picked off for a time to induce multiplication of rootlets to stand the strain of future dry weather. Fork deeply under each plant, mixing in some old manure, with a dash of old soot and bone-meal. Each plant should have an 8-inch space. Plant

12 inches apart and restrict the stems to 3 inches, or at the most 4 inches, with a maximum number of two buds to each stem. Some exhibitors stake each plant, but my experience is that the most satisfactory results are obtained by allowing the natural form of growth. Violas are moisture-loving plants, and therefore a good soaking over and under once a week during warm weather is necessary. Occasional applications of weak soot-water and weak manure-water are beneficial, especially if exhibition blooms are required.

Selections.—For exhibition: Agnes Kay, Moseley Perfection, Mary Burnie, Lady Knox, G. C. Murray, Gladys Finlay, A. S. Frater, Nettie McFadyen, Bethea, Willie Farmer, Kate Cochrane and Jessie Harrison.

For bedding: In addition to the above, Mrs. Chichester, Edina, Maggie Mott (scented), Swan, Lark, Alexandra, Redbraes Yellow, White, or Bronze, Kitty Bell, Lady Clonbrock and Hector McDonald.

For massing: Centre, Lady Knox; border, Edina. Centre, Mrs. Chichester; border, Kitty Bell. Centre, Swan; border, Maggie Mott. Centre, Moseley Perfection; border, Bronze Kintore. Centre, Bethea; border, G. C. Murray. Centre, A. S. Frater; border, Nettie McFadyen.

One colour beds: Mrs. Chichester, Lady Knox, Lady Clonbrock, A. S. Frater, Swan, and Maggie Mott.

B. W. LEWIS.



A NEWLY ROOTED CUTTING PRODUCING FLOWERS. A BEERED PRAY IS SHOWN IN THE FOREGROUND

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Melons in Frames or Pits.—Very good fruit may be grown in frames during the summer, but there should be no delay in making up the hot-beds so that the plants may become established before the season is too far advanced. The bed may consist of stable litter and leaves in equal parts, and should be trodden lightly. The soil should then be placed in good mounds in the middle of each light, and, when warm through, be made tight by ramming. One plant is sufficient for each light, and should be stopped beyond the fourth eye, so that four shoots may be trained from each plant. Peg the shoots to the soil, and when they have made good growth the tops may be pinched in order to encourage side shoots, on which the young fruits will appear.

Cucumbers.—Early plants will now be fruiting freely, and should receive liberal supplies of manure-water at the roots. Top-dress the bed as often as the young roots push through the surface. Loam and decayed manure in equal parts may be applied.

Plants Under Glass.

Cyclamen.—Seedlings raised in the autumn should now be ready for potting into 3-inch pots. The soil for this purpose may consist of loam and leaf-soil in equal parts, with sufficient sharp silver sand to keep it in a porous condition. Pot moderately firmly and grow in a temperature of 60° quite near the roof glass. As the season advances they may be transferred to clean, well-ventilated frames, where protection from strong sun can be applied. By the beginning of July they should be ready for potting into their flowering pots. Water must be sparingly given until they are established, after which a liberal supply must be provided, and the syringe freely applied in the afternoons to keep them free from insects.

Hydrangeas.—Autumn-struck plants which are approaching the flowering stage should be freely watered with liquid manure. Keep them near the glass in a temperature of 60° until the flowers are fully developed. Old plants intended for summer flowering should be allowed to remain in a cool structure, and watered freely with liquid manure.

Amaryllis.—When the flowering season is over, the plants should be assisted in their growth by some approved stimulant in order to secure the best results another year. When the plants have finished their growth, gradually give more air and allow them to rest in a quiet, cool structure.

Clivias.—Plants which have finished flowering should not be allowed to suffer from the want of water. Give frequent applications of liquid manure throughout the summer, and do not pot the plants before it is necessary. As the season advances, the manure may be discontinued and the plants grown in a cool structure.

The Flower Garden.

Pansies and Violas.—Plants which were propagated from cuttings in the autumn should now be planted in their flowering quarters. Both the Pansy and Viola thrive best in deep, rich soil and a somewhat shaded position where they are not exposed to the full sunshine during the hottest part of the day.

Lobelia compacta.—Seedlings should be pricked into boxes or frames as soon as large enough to handle, for if once allowed to become drawn they will be of very little value. When they have become established and are growing freely, the tops may be clipped in order to induce side growths.

Mignonette.—Frequent sowings should be made during the next two months to ensure a continual supply of flowers throughout the summer and autumn. Keep a sharp look-out for slugs, which are very fond of the young seedlings, and dust the plants with soot in the early morning while the leaves are damp.

The Lawn.—Grass is growing rapidly now, and should be mown frequently, as nothing is gained by allowing too long an interval in this matter. Nothing is saved in labour, and the lawn itself will suffer in consequence. Trim the verges frequently, as neglect in this matter tends to give the garden an untidy appearance.

The Hardy Fruit Garden.

Peach and Nectarine Trees on walls will now require careful attention. The disbudding of these is an important matter, and should be accomplished a little at a time, commencing at the top of the tree and rubbing off the shoots at the back of the branches, as well as those directly in front, then others in unsuitable positions; but avoid severe thinning of the shoots at one time, for it is safer practice to go over the trees at intervals of a few days until the work is completed, and it is only by careful study of the requirements of each tree that the work can be successfully accomplished.

Insect Pests.—Aphides are a most troublesome pest, and generally make their appearance as the trees are passing out of flower, when it is difficult to adopt measures strong enough for their destruction without injuring the young growth; but as soon as these insects are noticed, no time should be lost in syringing the affected points with some approved insecticide, and the trees should be thoroughly syringed with clear soft water early in the afternoon when the outside temperature is favourable.

The Kitchen Garden.

Herbs.—The present is a good time to make new plantations of Mint. If single cuttings are planted in rows a foot apart and the same distance between the plants in the row, they will soon make good, strong plants, and will quite cover the ground before the end of the season. Tarragon may be treated in the same way, but should be allowed double the space between the rows.

Thyme.—Young seedlings should be planted in light, rich soil and allowed a foot between the plants each way.

Marjoram should now be sown in gentle heat. Prick off the seedlings as soon as large enough to handle, and grow in a slightly heated pit. When large enough, they should be planted on a warm border. Lift and pot in September for winter use.

Basil may also be sown now in heat and the seedlings transplanted as soon as large enough. A warm south border should be selected for summer supplies, and a sowing made in August for winter use.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Brassicas.—When the seedlings are large enough to handle, they should be pricked into a prepared bed about four inches apart. In making up this bed it will be wise to put up a temporary shelter with some rough boards, so that the young plants can be protected for a time. A few Spruce branches or a garden net could be used for this purpose. One might think this a little too much work to devote to such common things as Cabbage or Cauliflower. At the same time, they will well repay for the extra labour.

Vegetable Marrows.—Too often these are grown far too large, which renders them so coarse and difficult to cook. Fortunately, there are small varieties now on the market which come early to maturity, and if possible have a more delicious flavour than some of the older sorts. One has only to try a dish of Sutton's Table Dainty to realise how excellent Marrows are, after all. Seed may be sown now and treated almost as one would frame Cucumbers. They will give a good return from a small outlay.

Growing Crops.—These will be greatly assisted with an occasional application of nitrate of soda sown between the rows. There is no hard-and-fast rule as to the quantity to apply, but an open handful to every 3 yards will be a good dressing. Afterwards stir up the soil with the Dutch hoe.

The Flower Garden.

Half-Hardy Annuals.—Those that were sown last month will be almost ready to prick out, and at this stage it is imperative that they should be placed near the glass, whether in greenhouse or frame. It is also important that they should not be allowed to become dry. When it is necessary to water the seed-pans, it is best done by standing them in a tub containing a few inches of tepid

water. Prick out the seedlings in most cases as soon as they can be handled, and in preparing soil for this purpose it should be of a nature that roots can cling to, so that when moved to their flowering quarters they do not suffer much check.

Spraying Roses.—As a preventive of mildew on Roses, one should spray them immediately after they have been pruned, and all the dead leaves and rubbish cleared away. There is no doubt that much could be done to check this fungus by timely spraying. For many years I have used Bentley's Mildew Destroyer, which I consider an excellent fungicide. Where, however, this is found to be ineffectual, one might try sulphide of potassium. An ounce dissolved in soft water would be strong enough. Apply this with a fine spray to the affected plants in the evening, going over them the following evening and syringing with clear water.

Sweet Peas.—Plants that have been grown in pots and boxes may now be transferred to their flowering quarters, provided they have been hardened off. In planting in rows I find it advisable to draw a drill about four inches deep and plant in the bottom. The young plants thereby get a certain amount of shelter. At the same time they should be protected from cold winds by small pieces of Spruce on both sides of the row until they are sufficiently strong to stand the weather. To guard against sparrows and slugs, give the plants a dusting of old soot or lime, and repeat this from time to time.

Auriculas.—Last year's seedlings should now be transferred to their flowering quarters, which, by the way, should not be in the full glare of the sun. Seed might also be sown now, and, like older plants, the young seedlings should be well shaded from the sun.

Plants Under Glass.

Plumbago rosea.—No time should be lost in introducing the old plants into heat to produce cuttings. I find they root very freely, and anyone wishing to have a display of flowering plants in midwinter would do well to grow a good batch of this Plumbago. It is much more graceful in habit than any of the winter-flowering Begonias, and, if anything, the flowers are more telling. They are of a fine deep rose pink colour.

Gloriosa superba.—This lovely stove climber, which still maintains its popularity, will now be starting into growth. Where the plants are grown in pots, the tubers should be shaken out of the old soil and repotted in a mixture of good turfy loam, sand and a little charcoal. Place them in the warm end of the stove until they get a start, afterwards moving them to where they are to flower. I remember seeing a very pretty arrangement in which the Gloriosa clothed the roof of a fernery. The effect was really fine.

Chrysanthemums.—All the young plants may now be placed in cold frames, taking precautions to have some covering material handy in case of extremely cold nights. Endeavour to keep them as near the glass as possible, and admit air with caution for a few days. Afterwards the sashes might be removed on fine days.

Fruits Under Glass.

Planting Young Vines.—Where the young Vines have been grown in pots, preparations should be made for planting, that is, if they have been previously started into growth. The soil should be entirely shaken from the roots, and perhaps the best method of doing this is to place the ball in a tank of tepid water, when the roots will soon get disentangled. In planting, spread out the roots carefully and cover with some prepared soil, finishing off by giving them a slight watering. As the young growths will be inclined to flag until the roots get a hold of the soil, the house should be shaded just above them, when they will very soon recover from the shift. Vine eyes that were rooted in turves may either be planted now or left until well on in May. Many growers prefer doing this as late as June.

Figs.—On early trees the fruit will now be swelling, and where they are confined in pots or built receptacles they may be given liberal supplies of liquid manure. Constant attention must be paid to stopping all shoots about the fifth leaf to avoid overcrowding and also to assist in swelling the fruit.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linthgow.)
Hopetoun Gardens, South Queensferry, N.B.

DAFFODIL NOTES.

Past History.—Owing to Easter and its attendant alteration of the ways of THE GARDEN, I cannot deal with the Royal Horticultural Society's show on April 7 as I otherwise would have done, but I am taking the opportunity to dip into the past. Yes, "to dip into the past," in this busy, bustling Daffodil time, when everyone, from the editor downwards, is athirst for something "practical," or what they call practical, for this is a word which, like some of those most judiciously recorded prayers in the Book of Common Prayer, may mean one thing to one person and another to another. I call the past practical for the very simple reason that a visitor's enjoyment is always greatly increased when the cicerone is able to talk about the plants he is showing. Go round anyone's garden but your own, alone—how dull! Go round with an owner who can tell you little more than you may read for yourself on the labels—how annoying! how irritating! On the other hand, go with the man full of historical and "cultural" information, who can tell you of the coming of the Dahlia or the first appearance of the Fuchsia, and talk pleasantly and banteringly of the spelling of the one and the pronunciation of the other—how different then is the tour of that garden! We all know it.

The Daffodil gives us plenty to talk about. The word itself has a derivation which so far has baffled the understandings of the learned—"affodil," perhaps, but that "big, big D" ("My Garden in Spring," page 120). Why that? Here is a fine colony in some damp part of the rockwork of the curiously shaped cyclamineus. It is an opportunity for a digression on the old flower picture-books of a long-distant past. Some figured this quaintness. Not many tens of years ago, everyone thought it as much an effort of the imagination as the blue Daffodil in Miss Silberrad's interesting novel of Dutch life in the bulb districts, "The Good Comrade." There it is in Pierre Vallet's "Le Jardin du Roi très Chrestien Loys XIII." (1623), under the title *Narcissus Hispanicus*. But it became so entirely lost sight of in gardens and in its wild habitat that no less an authority than Dean Herbert called it "an impossible plant." Then, somewhere about 1886, it was rediscovered by Mr. A. W. Tait of Oporto, to the amazement of all.

Another fruitful source of conversation might well be an ancient catalogue and the changes which have come about in its varieties during the short life of the plant as a popular garden flower. I have an early list of Messrs. Barr and Sons, dated 1887, before me now, also one of the same firm's of 1912. The twenty-five years' interval has revolutionised both of them—the flowers and us. We have been educated, I suppose I might say, and the flimsy perianths and the small starry forms of the earlier hybrids, which astonished and pleased the first Daffodillers, as, for example, Mary, Robin Hood, Acis, John Stevenson, John Bull, Shirley Hibberd, King Umberto and numbers of others, are for the moderns of to-day mere words—catalogue names suggesting nothing. And they have been improved, we say and think. White Lady, Noble, Evangeline, Lucifer, Blackwell, Whitewell, Olympia and Lady Margaret Boscawen are now upon the scene. We point them out with gusto and pride, and if we want to digress and turn our little plot into a sort of ancient Athenian lecture hall, a talk about "What an improvement" will make it wondrous like.

"Improvement is a getting away from Nature," says the host. "Yes," says the visitor, "it is *But* you—" And so on, and so on. There you have done it, and interesting and heated arguments flow.

It may happen, however, that we stop before a Challenger or a Cræsus. Without being purse-proud—for we need not mention the fifty guineas that those two bulbs cost us—we may talk of prices: how "Peter Barr" actually found purchasers at fifty pounds a bulb; how Emperor, probably the finest of all Daffodils, never seems to have been valued at that number of pence; how the raiser's family sold the stock of *Horsfieldii* for a shilling apiece. There is much of interest to be said of prices.

No less in bulbs than in cut flowers in the market. My friend, Mr. William Poupart, doubtless often looks back on the halcyon days of the past, to the seventies when he and others—dear old James Walker for one—began to develop this important industry. The fear and trembling with which he bought *ornatus* and refused *Horsfieldii* were only possible to a pioneer. Then other firms joined in, for prices were high and alluring. Some say now that the game is up and that present prices are almost unremunerative. But from what we have been "forced to hear," it is not played out yet. A Napoleon comes along in the person of Walter T. Ware, who, first of all, has the sagacity to know a good thing when he sees it; who, secondly, knows how to get over a poor "unsophisticated" Dutchman; who, thirdly, knows how to wait; and who, fourthly and lastly, knows how to put flowers on the market and bulbs into traders' catalogues, with, I feel certain, not a little monetary satisfaction. If you have it in your garden, you might point to Queen of the West as a supreme example of his skill in the masterly handling of his forces.

Possibly, however, we are seedling raisers, and at last we are in front of some of our very own. My eye! How the most silent tongue can wag them! Only if the friend who accompanies us is not a hybridist himself, let us be content with generalities or broad outlines, for he will not want to know the pedigree of this and that right away from Backhouse and Leeds. Those details will not interest him. Thus we might ramble on and on, each host naturally talking of those points and parts of Daffodil history or cultivation which "find" him or appeal to him most. So is a visitor's pleasure increased and his interest tickled, and who knows but what in the end he may be caught. Let us hope so. Surely, these are some of the things to be aimed at in life—a pleasant smile, an insinuating way, a good bedside manner, an unaffected politeness, some Daffodil knowledge and the facility of imparting it as one takes a friend round one's garden. JOSEPH JACOB.

THE EDITOR'S TABLE.

New Freesias from Holland.—It is with considerable pleasure that we have received from Mr. C. G. van Tubergen, jun., Zwanenburg, Haarlem, some of his charming new Freesias. The colour shades of these are really wonderful, and in some unlike anything we have ever seen before. For instance, a variety named *La Charmante* is a glorious mixture of rose, golden yellow and apricot, that must be seen to be fully appreciated. *Amethyst* is a beautiful shade of lavender blue; *Canary*, deep golden yellow; *Monette*, rosy

cerise and cream; *Robinella*, deep claret red; and *Apogée*, very deep golden yellow. The size of the flowers is fair, and in most instances they are of good shape. We congratulate Mr. van Tubergen on his success with these charming and fragrant flowers.

SWEET PEA NOTES.

AS these notes are being penned, the glorious warm rays of the sun, the hum of insects and the songs of birds kindle anew the hope that at last spring has arrived. But what a March! Could the weather have been worse? Rain, rain, and rain again, and the hearts of Sweet Pea growers dropped almost to the point of despair as they beheld their soil waterlogged; and even if the good weather continues, many days must pass before the land in this district is workable. As a strong advocate of autumn trenching, one derives a glimmer of satisfaction from the recent bad weather, as it has conclusively proved the advisability of getting the preparation of the soil done as early as possible. The plants have sadly suffered through lack of sun, and those growers who have plants under glass growing for exhibition complain of soft, attenuated growths. The ordinary gardener whose plants are thus suffering may help them by giving them plenty of air, and at the same time keeping the fires going; but with a few days' sun and warmth I do not think one need worry. All will yet be well.

What does concern many is the fact that their seedlings are suffering in the boxes or pots and the ground unfit for planting out. Hard as it may seem, my advice is to wait until the soil is in a fit condition and workable. The check the plants are sustaining now can be minimised by giving them plenty of air and an occasional watering of very weak soot-water; but you risk total failure if you plant in wet, sticky soil, while, to attempt to work a heavy soil when wet, borders on madness, and its utility is nil.

Method of Planting Out.—The question of what constitutes a check is a very controversial one, and often too much stress is laid upon matters of very little moment. The ideal way of raising plants is singly in a pot, and thence to transfer them to their growing quarters by the following method: The day previous to the planting out well water the plants. This enables the entire ball of soil to be easily knocked from the pot, when the hole which has been made by a trowel is ready to receive it. Place the entire ball with the plant and twigs (these supports are essential) carefully in the hole prepared, and press the soil well round it. Do not be afraid of making the soil fairly solid, for Sweet Peas like a firm soil to dwell in. The foregoing process applies to all plants grown in pots. Many growers, however, raise seedlings in boxes, and each must be carefully separated from the other without undue injury to the roots. "But what a check!" says one, and this is the controversial point. If the following plan be adopted, there is little or no check: I have already emphasised the fact that no planting must be done unless the ground is in a good working condition, and this is easily tested. Take up a handful of soil and squeeze it in the palm of the hand. If it becomes a sticky, wet mass, then it is not in a fit condition for planting; but if it easily falls away and does not wet the hands, when the soil is ripe for receiving the plants.

If the plants are to be grown in rows, then make a deep drill with a spade and arrange the plants about a foot apart along the line, cover with soil and water in; this enables the roots to be entirely covered with soil, and leaves no spaces, so to speak. Then cover with more soil and press firmly, putting twigs for supports. Do not use a dibber, but always plant with a trowel. Single plants thus treated seldom show any signs of having received a check, and I am of the opinion that this is by far the easiest and most successful treatment for Sweet Peas for decorative purposes.

Sweet Peas in Tubs.—Many an amateur laments lack of space, but a paved backyard can be converted into a "Sweet Pea garden" for a very small outlay. Get a few lard tubs and, having bored holes in the bottom for a drainage outlet, fill with good soil. Having planted the seedlings, the Simplicitas Circle makes a fine finish, and Sweet Peas thus grown and kept well watered and free from seed-pods will yield a wealth of blossom for many weeks. It will be necessary to give liquid manure fairly frequently when the plants are in full flower, and an almost daily watering with soot-water will keep the foliage in good condition. Sweet Peas in tubs are most effective and quite easily managed. This method of culture should become more popular, as the tubs can be placed in any selected spot and add beauty where all else fails. S. M. CROW.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

CHRISTMAS ROSES (Wrotham).—The Giant Christmas Rose (*Helleborus niger maximus*) is the largest-flowered of its race; the blooms are white, ruddy on the outside, and appear in November. *H. juverna* has smaller and much whiter flowers, which do not open before mid-January. The plant, too, is of dwarfer growth. There are other forms, as major "scoticus" and *Mme. Fourcade*, the whole constituting a set valuable for successional flowering. The better way would be to obtain plants in September next; it is now too late to plant them. Seeds are very slow to vegetate, and often take a couple of years before the plants appear. After that, you may have to wait

half-a-dozen years before the flowering stage is reached. If in August next you will write us again, we will give you the necessary instructions for planting at a seasonable time.

NEGLECTED GARDEN SOIL (Sipho).—If, as you say, "the garden has not been manured or attended to for many years," nothing short of a thorough trenching and manuring are likely to be of the least service. In such circumstances no manure is equal to well-decayed stable manure, which may be dug in liberally at 9 inches to 12 inches deep. You may further improve the fertility of the soil by forking in lime at the rate of one bushel to each rod of ground. That might be done subsequent to the trenching and manuring. Artificial manures are no fitting substitutes for those of an organic nature in such circumstances. They are serviceable, rather, as adjuncts later on. We could only say whether the soil required lightening after seeing it or a sample of it. If heavy, as you say, lime will assist porosity, and double the above quantity might be given for that purpose. Ashes, i.e., coal-ashes, while assisting drainage, not infrequently impoverish the soil, while those from rubbish fires are rich in potash and other salts. It will be best to prune the newly planted Roses rather hard back this year, and in doing so remove all weakly shoots at ground-level. Some of the stronger shoots may flower this year if left, though it is usually at the expense of a better display later on. If the stronger shoots are well ripened, some of these may be retained, pruning them back about eighteen inches. The remainder should be pruned to within six inches of the ground, to encourage good rods for flowering next year. As you confess to "knowing so very little about gardening," we may remind you that we are always willing to render what assistance is in our power.

THE GREENHOUSE.

INFORMATION ABOUT THOMASIA SOLANACEA (Life-long Reader).—Your surmise that the name of the specimen enclosed is *Thomasia solanacea* is quite correct. It is a native of Australia, whence it was introduced in 1803. It has been grown here ever since, but outside of a botanic garden it is rarely met with. The reason of this is that the flowers are not showy enough for general decorative purposes, the standard by which nowadays everything is judged. In Cornwall, and in the milder parts of Ireland, this *Thomasia* will, no doubt, succeed out of doors. Generally speaking, however, it must be regarded as a greenhouse plant. Nearly fifty years ago there were two or three good specimens in the Temperate House at Kew, and no doubt it is still represented there. Cuttings of the half-ripened shoots put into sandy soil in a propagating-case with a gentle heat will root without difficulty. It succeeds well in a mixture of loam, peat and sand.

INCREASING ECHEVERIA METALLICA (Quaker).—You seem to be particularly unfortunate in your attempts to propagate *Echeveria metallica*. It should winter well in the temperature stated by you—45° to 50°—during which time the roots must be kept moderately dry, but not parched up. It is strange that the leaves die after they are rooted without forming a plant at the base. Perhaps you do not strip off the leaves to their full extent. They are best dibbled into sandy soil and placed on a light shelf in the greenhouse or similar position. This is a very suitable time of the year to put in leaf cuttings. Perhaps you did yours in the autumn or winter season. We cannot understand the reason why the old stools do not throw out shoots when the tops are removed. They should be kept almost dry and in a light, sunny spot. There yet remains another mode of increase, and that is, if you can grow on a strong specimen so that it flowers, if it is kept in a sunny greenhouse and the flowers are fertilised with their own pollen, seeds will be produced, and, from these, young plants can be raised in quantity. *Sempervivum tabulaeforme* can be increased by leaves, but not very readily. When old plants are tall enough they may have the tops taken off, and the lower part of the stem will in time break out. Besides this, suckers are sometimes available, and seedlings may also be raised.

TREATMENT OF IMANTOPHYLLUM MINIATUM (Clivia).—We cannot find any disease affecting the leaf of the *Imantophyllum* sent, for the old leaves often go off in the spring just as the flowers and new growth are pushed up. There must, however, be something lacking in the condition of the plants that induced them to flower in an erratic manner last summer. This would fully account for the comparative failure now. We are inclined to think that the roots of the plant are not in a healthy state, and this could be easily determined by turning the plants out of their pots. If our surmise is correct, the main thing is to get the plants well furnished with healthy roots. This may be accomplished by shaking off the old soil and cutting away all unhealthy portions. It is quite possible that the plants may, with advantage, be put into smaller pots. In any case, they must be repotted in a compost made up of loam, lightened by a little peat or leaf-mould and a liberal sprinkling of silver sand. Care must be taken that the pots are well drained with broken crocks. After this, the plants must be carefully watered, especially till the roots take possession of the new soil. Established plants need to be kept moderately moist at all seasons. Of course, more water is required during the summer than in the winter; in fact, at this last-named season, they may be allowed to get fairly dry. Should the roots of your plants prove on examination to be quite satisfactory, we advise you to give them a top-dressing of some suitable compost, and during the summer an occasional stimulant. The plants may be stood outside throughout the summer, but very heavy rains are not beneficial to them.

TREES AND SHRUBS.

ALMONDS NOT FLOWERING (Dr. W. H.).—It is probable that your Almond trees have grown too vigorously and too late in the season to allow of the wood becoming sufficiently ripened to produce flowers. If your soil is naturally deficient in lime, the addition of lime rubble to the soil will do good; but as your trees are growing freely, there is no reason for applying manure. You might open the ground here and there about the roots, and cut through a few of the principal roots. This will cause sturdier, and consequently better ripened, wood.

MISCELLANEOUS.

SMALL WHITE WORMS (Roman).—The little worms sent are known as white worms. They are somewhat similar in structure to the earthworms, but much smaller, and are often destructive to the roots of plants. They may be destroyed by any of the worm-killers, or by giving the lawn a soaking with lime-water.

BULBS FAILING (Dreamer).—Many bulbous plants suffered greatly last season owing to the dry weather that occurred during the months of May to July, and as a consequence they have given very poor results this season. Only one of the bulbs you sent showed damage by any external agent—the *Narcissus*, and that was attacked by bulb mites. The others had either failed to produce roots or root development had been very feeble all through.

STARTING A MARKET GARDEN (S. E.).—A great deal depends on the situation—nearness to a railway station or market—warmth of soil, aspect, and labour available in growing various crops of fruit, vegetables or flowers. Our advice is to ascertain first what is required in the neighbourhood, the means of disposal at various times of the year, and then make your plans accordingly. Until you have satisfied yourself that there is a reasonable prospect of success, we do not advise you to invest capital. The salient point, though, in market gardening is to produce crops, of whatever kind they are, as early as possible. For instance, salads are much in demand early in the spring; so are new Potatoes, early Cabbage, Mushrooms or Green Peas. The same remark applies to Strawberries, Apples, Currants or Grapes; flowers, too, on the same basis.

NAMES OF PLANTS (Beaver).—The flower is *Veltheimia viridiflora*; the leaf is *Monstera deliciosa*.—W. G. Wallace.—*Narcissus cernuus plenus*.—A. Cole.—*Ophrys aranifera*.—*Eriobotrya japonica* (Loquat); *Myoporum laetum*.—W. E. P.—1, *Abutilon Savitzii*; 2, *Spiraea japonica*; 3, *Symphoricarpos orbiculatus*; 4, *Scelopendrium vulgare marginato-cristatum*.

SOCIETIES.

DEVON DAFFODIL AND SPRING FLOWER SOCIETY.

THIS society opened its spring show in the Guildhall, Plymouth, on April 2. It was a successful exhibition, the competition being very keen and the flowering shrubs quite as good as they were at Truro. The prize-list included: Collection of twenty-four varieties of Daffodils, first, Miss Clarice Vivian; group of Daffodil seedlings not yet in commerce, first, Mr. H. G. Hawker; six varieties yellow trumpet, first, Miss Clarice Vivian; six varieties bicolor trumpet, first, Miss Clarice Vivian; collection of nine varieties spring flowers, first, Mrs. Froude—Iris tingitana in this stand was very fine and received cultural commendation; and six varieties spring flowers, first, Mrs. D. M. Yonge.

Flowering Shrubs.—Group of Rhododendrons, first, the Earl of Morley; fifteen varieties of hard-wooded flowering shrubs and climbers, first, Mr. H. W. Grigg, who showed *Osmanthus Delavayi* (first-class certificate), *Prunus spinosa* flore pleno, *Ceanothus rigidus*, *Forsythia suspensa*, *Citrus trifoliata*, *Prostanthera rotundifolia*, *Phillyrea decora*, *Erica australis*, *Illicium religiosum*, *Grevillea sulphurea*, *Prunus persica* flore pleno, *Cerasus sinensis pendula*, *Akebia lobata*, *Clematis balearica*, and *Magnolia soulangeana*. The competition in this class was so close that only four points divided the first, second and third stands. Six varieties hard-wooded plants, first, Mr. T. B. Bolitho, with *Grevillea Preissi* (award of merit), *Clematis indivisa lobata*, *Dendromecon rigidum*, *Eriostemon myoporoides*, *Acacia diffusa*, and *Grevillea ornithopoda*.

Nurserymen's exhibits added materially to the display. The Devon Rosery, Torquay, showed a splendid collection of new Roses, as well as fine plants of such ramblers as Dorothy Perkins, White Dorothy, Excelsa, Aimée Vibert, Edmond Proust, Blush Rambler and Leuchstern. They also showed *Amaryllis*, very fine, the new *Azalea Joseph Vereane*, *Acacia cordata*, *A. armata*, *Lopezia miniata* and new Lilacs. Messrs. R. Veitch and Son, Exeter, showed *Camellia magnoliiflora*, *Cineraria Matador*, *Grevillea longifolia*, *Eriostemon linearifolium*, *E. buxifolium*, *E. neriifolium*, *E. scabra*, *Prostanthera rotundifolia*, *Chorizema Lowii*, *Eutaxia myrtifolia*, *Magnolia soulangeana*, *M. s. nigra*, *M. stellata*, *M. conspicua*, and *M. Lennéi*. Messrs. John Piper and Sons staged *Viola Golden Wave*, *V. gracilis*, *V. Piper's Black*, *V. Dream*, *Veronica diosmefolia*, *Lithospermum Heavenly Blue*, and a large collection of Primulas. Mr. J. C. Martin, Truro, showed an interesting selection of Daffodils, among which were Great Dane, Searchlight, Artificer, Iron Duke and Rockery Gem. Messrs. Barr and Sons gave a fine display of Daffodils, among these being Orangeman, Blazing Star, Furnace, Bloodstone, Argent Venus, Gwendalin, Battleaxe, and Fairy Queen.

THE GARDEN.

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APRIL 25, 1914.

NOTES OF THE WEEK.

The Double-Flowered Sloe.—It is difficult to understand why this charming spring-flowering shrub is so little known. Just now its dark-coloured branches are wreathed with snow white double blossoms, which make a very pretty feature in the landscape. It forms a large shrub or small spreading tree, and is quite as hardy as the Sloe of our hedgerows. Its botanical name is *Prunus spinosa flore pleno*.

Meconopsis Wallichii.—This lovely Poppy, with its attractive foliage, and which produces flowers of the loveliest pale blue imaginable, is somewhat difficult to manage. Sometimes it will stand out of doors during severe weather, while at other times it seems to go off rather mysteriously. In the North the plants had better be kept in a cold frame during the winter, and those that have to be treated may be planted out now. Those who experience difficulty in getting the plants to ripen the seed sufficiently early would do well to pot on one or two plants and flower them in a cool greenhouse. The same remarks apply to the beautiful *M. integrifolia*.

A Beautiful Prunus (*P. acidumosa*).—This exceedingly pretty tree belongs to the Cherry family, and, like all other members of the group, it is referred to under the name of *Cerasus*. In Japan cherry blossom time is marked by national rejoicing, while in this country the flowering of the Cherry, including innumerable varieties, is looked upon as the most delightful of all seasons in the garden or countryside. *P. acidumosa* is a variety of a European species which flowers profusely even at an early age. Flowering as it does without attaining great dimensions, it is a very desirable tree even in a small garden. This variety is not widely known, but it resembles All Saints' Cherry (*P. acidumosa semperflorens*), to which it is closely related.

The Rose Annual.—On another page we publish some particulars of the Rose Annual, the official organ of the National Rose Society. We have no hesitation in describing this as the best the society has ever published, and the thanks of all rosarians are due to the Council and the hon. secretary, who has acted as editor,

for their efforts. The Rose Annual for 1914 is an interesting, varied and practical symposium on Roses, and we hope all our readers will secure and read it. That way lies the advancement of the Rose.

A Useful Dwarf Shrub.—*Pyrus Maulei* is a valuable hardy, low-growing shrub, and flowers most profusely. It naturally assumes a neat, bushy habit, and is at the present time covered with its bright red flowers, which completely hide the plant. These are followed later by large

grouped in large masses between huge sandstone boulders, and the first named was a perfect sheet of violet blue flowers. Fire King, though not so free with its blossoms, was, however, a charming sight, the warm red flowers showing to perfection when kissed by the afternoon sun. Both ought to be grown in every rock garden where spring flowers are appreciated.

A Charming Golden-Leaved Plant.—Another *Aubrietia* that Sir Frank Crisp grows so well on his rock garden at Friar Park is *A. aurea*. Although we do not care for most plants with variegated foliage, an exception must be made in this instance. It would, perhaps, be more correct to speak of it as a golden-leaved plant, though some of the foliage is undoubtedly variegated. However, the main colouring is soft golden yellow, and as the flowers are pale mauve, the combination of colours is exceedingly charming. Undoubtedly its attractiveness is enhanced by the massing of the plants in one large group, instead of scattering them about as isolated specimens, as is too often done.

Spring Flowers at Hampton Court.—The beds and borders of spring flowers at Hampton Court are now flowering to perfection. In the long border, Wallflowers Harbinger, Primrose Dame, and Ruby Gem, the latter of a purple hue, are all beautifully arranged with a profusion of Polyanthus and spring bulbs. Hyacinth Cardinal Wiseman (pink) and Tulips Keizerskroon, Cottage Maid and Duchess de Parma are flowering magnificently. The following make very attractive beds: Tulip Rose d'Amour and Hyacinth Grand Blanche over a groundwork of the purple *Aubrietia* Dr. Mules; Wallflower Fairy Queen and Tulip

Fred Moore. What is perhaps the prettiest bed of all is composed of *Narcissus* Mrs. Langtry, Hyacinth Yellow Hammer and Tulip clusiana, otherwise known as the Lady Tulip. Other good beds are *Narcissus* Mme. de Graaff, Tulip Murillo, with *Aubrietia* Dr. Mules; and Tulips Yellow Prince and Joost van Vondel (white) with purple *Aubrietia*. *Narcissus* Queen of Spain with Saxifrage Red Admiral make a pleasing display when grown together.



A WELL-FLOWERED TREE OF PRUNUS ACIDUMOSA.

ruddy-cheeked fruits, which form a conspicuous feature in autumn. Being from 1 foot to 2 feet high, it makes a very attractive edging to taller shrubs, or it may be planted on the bolder parts of the rock garden with telling effect.

Two Beautiful Aubrietias.—When visiting the famous rock gardens at Friar Park, Henley-on-Thames, on Friday last, we were pleased to find *Aubrietias* Mrs. Lloyd-Edwards and Fire King growing to perfection. Both were artistically

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Large Narcissus Fly.—I should be greatly obliged to any of your readers who, digging up failing Narcissus bulbs at this season and finding the larvæ of the large Narcissus fly in them, would send examples to me.—F. J. CHITTENDEN, *The Laboratory, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey.*

Daffodils with Lasting Qualities.—I should very much like to know if any of your readers find any difference in the lasting qualities of Daffodils in bloom. This year I grew (in soil) bulbs of Victoria in a box and Mme. van Plomp in flower-pots. The latter were admirable, and the flowers kept in splendid condition much longer than the former. My accommodation for bulb-growing is extremely limited (one window), so that space is begrudged to bulbs that are quickly over; and a "wait and see" policy could be dispensed with if some of the readers of THE GARDEN would enlighten me as to which Daffodils and Tulips are the "best lasters." In Tulips I found White Pottebakker continued to bloom longer than Grace Darling. Three pots of Prince of Austria are superb. There can be nothing better in Tulips. Colour, carriage, and a delicate Primrose scent are some of their charms. An amateur naturally wishes to try something new every year, and a guide as to lasting qualities would be invaluable.—M. E. E.

Dahlia imperialis on the Riviera.—I was very much interested by your notes on this most famous plant in THE GARDEN for December 20, 1913. It certainly is very much admired by all in this part of the Riviera. I am sending you a photograph of a very fine specimen grown in the garden of Miss Kay-Shuttleworth. It is over fourteen feet high, and shoots forth from the ground in May and grows rapidly until flowering-time in November. It needs a stiff loamy soil, copious supplies of water, and plenty of manure, and will do well facing due south, protected on the north-east against cutting cold winds.—GEORGE PARISH, *Chalet Ponente, San Remo, Italy.* [Unfortunately, the photograph sent by our correspondent was not suitable for reproduction; it showed a very fine plant.—ED.]

Sparrows and Spring Flowers.—Re the notes which have appeared dealing with this subject in THE GARDEN under dates March 7 and 21, also April 11, I venture to draw the attention of the writers of those notes to an article in the *Country-side*, "Sparrows and Crocuses," by Mr. E. Kay Robinson, the well-known naturalist. Mr. Robinson says a careful examination seems to show that the birds are after the stamens of the Crocus, the anthers of which have some nutritive value, while the juicy tissues of some flowers and stems may be pleasant to eat also. Coming from such a careful investigator and acknowledged authority, I think these conclusions are weighty, and should be recorded for the benefit of all readers of THE GARDEN. This season, for the first time with us, the sparrows have bitten off several heads of Muscari Heavenly Blue, leaving them near by. Also the just opening flowers of a double mauve Primrose recently put in the rockery were nipped off and left beside the plant, while last year they disfigured several Polyanthus spikes before we noticed them—both colours, but chiefly the yellow shades. How they mutilate the quite young

leaves of the border Carnation when they push forth in early spring is well known. Apparently here it must be the juicy tissues that are the attraction. In each and every case the best deterrent so far known is a few strands of black cotton.—C. T., *Highgate.*

Established Bulbs of Chionodoxa.—In regard to your note on page 178 of April 11 issue, I cannot agree with Mr. Negus about Chionodoxa sardensis being at its best in its first season. I have grown it and C. Luciliae for ten years here, and each year they have increased in growth and produce better flowers than when first planted.—B. C. SYKES, *Borrobol, Kinbrace, Sutherland, N.B.*

—My experience with Chionodoxas agrees with yours. No newly planted bulbs, be they ever so fine, give such good results as established bulbs. With these the flowers are individually larger, and are much more numerous on the spikes. I find that they do best when planted rather deeply, not less than 6 inches. Self-sown seedlings eventually descend to that depth, and frequently deeper. The soil here is stiff loam on clay.—A. D. FORT, *Steepleholme, Slades Hill, Enfield.*

—I am at one with Mr. Negus in my dislike of loose colour descriptions, and often wish that there was some generally recognised standard of nomenclature, but I cannot understand why he objects to the term "Gentian blue" as applied to the tint of Chionodoxa sardensis. Perhaps he will tell us what he calls it, or how he would define it. To me it seems very appropriate. Again, with regard to newly planted bulbs being equal in vigour and floriferousness to those well established, I may say that I have bought a large number from both English and foreign sources for the last twenty years, and my experience is that it is only on those rare occasions which prove the rule that Chionodoxas, when they flower for the first time after being planted, are equal to those old-established plants which give me good, sturdy spikes of 9 inches to 12 inches in length, bearing anything between ten and sixteen blooms. Perhaps Mr. Negus is only thinking of what he bought last autumn when he says, "I have a few hundreds, planted last autumn, which are vastly superior in flower to my established clumps." It is rather curious that my bulbs, which were newly planted last autumn, have flowered this spring with altogether exceptional vigour; but this is not the rule.—JOSEPH JACOB.

The Improvement of Garden Roses.—There is much to be said in favour of the improvement of what are termed "garden Roses," but to do this there are many obstacles in the way. First, how are garden Roses to be defined? Some of the finest exhibition varieties are also excellent sorts for the garden. Take Gloire de Chedane Guinoisseau, one of the best of exhibition sorts, and certainly most valuable in the garden. The growth is vigorous, compact, and the freely produced blooms upon an ordinary bush plant are certainly decorative and suitable for any garden. Take, again, Dr. Grill as a bush or a standard. No Rose in the garden is more appreciated for cutting for the house, and no Rose of less value for the exhibitor. Take, again, Mrs. Edward Powell, a newer type, remarkable for its rich colouring, robust growth, freedom and continuity of flowering right into October. As a garden Rose none is more appreciated. It is most difficult to define a garden Rose apart from an exhibition variety. I think we shall find Mme. Edouard Herriot one of the best of garden

Roses, but doubtful as an exhibition variety. I really do not think much fault can be found with the awards of the National Rose Society, when we consider what a large number of sorts are yearly placed before the committee. Those gaining an honourable distinction in the past have as a whole fully borne out the justice of the award. What I think is carried to excess is the enormous number of new varieties sent out yearly, especially by some firms. So many are nearly alike that we do not require all that are put upon the market; but how is the amateur to discriminate when nothing but a catalogue description to guide him is available? Some suggest a national trial garden for all new varieties. That scheme is not likely to come to pass; it is much too slow for the present day. If a promising new variety is introduced, the amateur wants it at once, as there is so much charm in watching the development of new sorts with a high reputation. I think if nurserymen would send out fewer new sorts annually, giving them a further test, the public would have more confidence and be inclined to purchase more freely. Personally, I do not think very drastic steps are needed in the method of recognising desirable new varieties of garden Roses.—E. M.

—A discussion of this subject is certain to appeal to a very wide circle of your readers, and it is to be hoped that some valuable suggestions may result. Though keen amateur rosarians may by "elimination of undesirables get what they want," it seems to me that this method, involving as it does expense, waste of time and disappointment, has little to be said in its favour, particularly in the case of those enthusiasts whose means and space are limited. Your correspondent Mr. Taylor points out on page 171 issue April 4 that the system under which awards for show Roses are granted is useless applied to garden or decorative Roses, and it is here, I think, that a strong appeal should be made to our National Rose Society to formulate some scheme for "hall-marking" such of the new Roses found to excel in those desirable qualities enumerated by "White Rose." Form and colour are details quite readily picked up at the shows; but three points to which I attach special importance, viz., freedom of bloom, behaviour as a cut-back, and healthiness of foliage, can only be correctly judged by extended trial. To take a case in point. That very beautiful Rose Queen Mary, Mr. H. E. Molyneux, whose criticisms of the newer Roses are so highly appreciated, appears to have fallen a willing victim to its charms, and yet, judging solely by the plants on view when it was awarded the gold medal last July, neither its growth nor its beauty of foliage appears to be a marked feature of merit. (Mr. Molyneux does not refer to either point in his appreciation.) There are, I am sure, many rosarians who prefer to see their Roses in the garden, and it is there that healthy, ample and handsome foliage is absolutely essential to bring out the fullest beauty of the bloom. Those varieties subject to defoliation, mildew, &c., cannot be considered good garden Roses. I venture to suggest that if a distinctive award for decorative Roses only could be instituted—the points to be taken into account being form, colour, fragrance, growth and freedom as a cut-back, quality and amplitude of foliage—such an award would stamp a Rose as of outstanding merit for garden purposes, and be accepted by amateur rosarians with implicit confidence.—H. STEVENETTE, *Wanstead, N.E.*

Camellia reticulata Flowering Outdoors.—Of your readers may like to know that after four years from planting I picked on Good Friday some lovely blooms of *Camellia reticulata* grown in the open ground in peat soil, and with no covering during the winter.—ALFRED C. LEVER, *Saltwood, Kent.*

Preserving Stone.—On page 188 of your issue of April 11 I notice under "Answers to Correspondents" a reply to "E. F. O." The Bath stone firms of Bath sell a chemical called (I believe) Fluuate, which has the virtue of hardening all kinds of stone, and this will probably supply your correspondent's need. I so much enjoy THE GARDEN that I shall be glad if this information is of any use to you.—PERCY C. WEBB.

Coronilla glauca Growing Outdoors.—It may not be generally known that the old sweet-scented *Coronilla glauca* that is grown in the greenhouse will thrive and do better planted out in the garden in a warm situation. I was looking round a garden the other day, and saw two plants of *C. glauca* growing on a warm south border. The gardener told me he planted them out about two years ago. They certainly looked the picture of health, and appeared to enjoy their open position. I noticed the plants were smothered with the pretty yellow, fragrant flowers, and the bees were busy about them. I thought what a contrast to the starved condition we often see them in the greenhouse.—W. DRIVER, *Stonehouse.* This plant does well outdoors in many districts.—ED.]

Cold Storage for Roses.—Regarding this, "Danecroft," on page 167, issue April 4, is hardly correct in stating that American florists cold store Roses. All the United States florists have ice-boxes—really, large glass-sided coolers—for keeping flowers during the hot weather; but actual cold storing for an indefinite period is not possible. Prior to certain flower days, of which there are many in America, some growers and wholesale florists do hold up part of their supply for two or three days; but these "pickled" Roses and Carnations arouse great hostility. Retailers who get hold of such stock quickly discover the fact, for the blooms soon collapse when exposed to the ordinary temperature. I venture to hazard that chilled Roses would soon be asleep if staged at a summer show.—C. A. W.

How to Trap Slugs.—I am sure everyone with a garden where the soil is heavy is plagued with slugs this year, and just at present they are increasing very rapidly. I have tried Orange Peel, patent traps, slices of Turnip, and Cabbage leaves. All are good, but cover far too small an area. I have now begun on a large scale to trap them by means of an old wet sack thrown on to the seed-bed at night, and either bran or a little flour sprinkled under it. Every kind of error from the soil is revealed in the morning. Wireworms hurry down their holes, woodlice curl into balls ready to be caught, and slugs and snails lie on the sack, and can be shaken out

in the chicken run.—ETHEL CASE, *Bishop's Waltham Chase.*

A Beautiful Hardy Plant.—To those who intend adding to their list of hardy plants, I should like to mention *Oenothera Arendsii*, a lovely subject for the rockery or border. We grew it last year for the first time. It proved a most useful and continuous plant to flower from June to October, with pretty rose pink flowers. It can be easily propagated from cuttings, and it came through this winter without protection. It prefers a warm, sunny border.



A NEW VARIETY OF THE PURPLE-LEAVED PLUM, *PRUNUS PISSARDII BLIRIEANA FLORE PLENO.*

I am of the opinion that it would be very useful as a pot plant.—M. NICHOLLS, *Kemsing, Kent.*

FORTHCOMING EVENTS.

April 29.—National Auricula and Primula Society's (Midland Section) Show at Birmingham (two days). Perpetual Flowering Carnation Society's Spring Show at Bournemouth (two days). Royal Caledonian Horticultural Society's Spring Show (two days).

April 30.—Manchester and North of England Orchid Society's Meeting.

May 2. Société Française d'Horticulture de Londres Meeting.

ROSE-GROWING IN TOWN GARDENS.

SOME NOTES ON ARRANGEMENT.

NEATNESS and order in a garden denote the careful cultivator, who will keep his plants clean and give them every opportunity to do well. But the benefits obtained from the exercise of taste in arrangement are beyond anything that mere tidiness can secure.

Some amateur Rose-growers, whose chief hobby is the exhibition of their blooms, like to model their gardens upon the same lines as the nurserymen. The latter find it convenient to marshal their plants in formal rows; but the amateur is planting for permanent effect, and surely it is best to make the appearance of the garden worthy of its productions.

In a small garden the ideal is naturally harder to attain, and it requires a certain amount of ingenuity to overcome the primness that is inevitable if one follows out the straight lines of the boundary in the design. Paths need not invariably be straight, beds may be fashioned into shapes that will help to avoid stiffness, and arches, pergolas or screens can be so placed as to secure effect without obstructing the outlook or apparently diminishing the size of the garden. These are points which need to be considered separately in relation to each individual case, and an arrangement that appeals to one may merely irritate another, so that it is well for each individual to be the surveyor of his own domain. The most natural and effective setting for Rose-beds is a lawn. Grass walks between give the beds a better finish, though they involve a certain amount of extra work in cutting and edging. Moreover, the beds should be sunk slightly below the surrounding level, and this is more easily effected in a lawn than elsewhere.

Colour schemes are well enough in a large and well-ordered establishment, but the town gardener usually finds them outside the range of practicability. Nevertheless, it is possible to avoid glaring errors of taste. It is with the red Roses that most care is needed, as it is in these that the clashing of colours mostly occurs. Scarlet tints, as in Captain Hayward, are perhaps the most difficult for which to find suitable companions, and they should never be placed close to crimson or deep rose pink shades. Salmon pink and rose pink varieties

should also be kept separate. Even in the lighter colours each kind needs to harmonise with its neighbour if it is to appear at its best.

To be able to identify all the trees readily is an obvious necessity, and labels have many drawbacks. They are always more or less unsightly. If fastened to the trees, they are apt to damage the growths; if placed in the ground, to get in the way of the hoe. The most satisfactory method is to make a rough plan of each bed, marking the names of the Roses as they are planted. Keen gardeners will find such plans add considerably to the joys of anticipation before their blooms appear. A rough sketch can be made very

quickly, but many will like to elaborate it at leisure.

Care is needed in placing screens, pergolas or other long and lofty arrangements, which frequently make a small garden look still more diminutive. A pergola should lead from one part of a garden to another; but it may also be made to form the entrance to the garden, and this is often the most convenient place for it where the latter is of small extent. It should not be placed across a short garden or down the centre of a narrow one. Sometimes it is difficult to know where to plant the climbing Roses so that they show to the best advantage. Pillars are always effective, are easily constructed, and do not take up too much room. They might often be made of more use. A row of these along the back (*i.e.*, the north or west side) of the Rose-beds will always be admired, and so placed they will not be depriving the other Roses of sunshine.

P. L. GODDARD.

COLOURED PLATE.

PLATE 1492.

ROSE RED-LETTER DAY.

THE beautiful decorative Hybrid Tea group will be immensely strengthened by the addition of this brilliant Rose. I shall not soon

forget the fine colour effect produced by a mass of Red-letter Day upon my visit to Newtownards last July. What a colour, and what a grower! It seemed to tower above every other Rose as far as effective display was concerned. The flowers are semi-double, and its velvety, brilliant scarlet crimson buds and fully opened Cactus-like petals never fade, as the reflex of the petals is satiny crimson scarlet, absolutely free from blue or magenta. This is a great gain, for everyone knows the bluish tint of the expanded flowers of such as Marquise de Salisbury is a great fault from a decorative point of view. There is a specially refined growth with Red-letter Day, and, as I said, it is splendidly vigorous. Moreover, it is festooned with bloom the whole of the flowering season. I can foresee the day when this beautiful novelty will

be massed in huge quantities, for it is just the Rose we have been waiting for. Those who have had to make Rose gardens know only too well the difficulty of supplying good, brilliant colours to compare with the paler and golden shades, and I fear many have resorted to the old Hybrid Perpetuals because of their splendid colours, only to throw them out for their lack of decorative effect. Messrs. A. Dickson and Sons seem to have produced a most wondrous strain of free-flowering decorative Roses of brilliant colouring, for I saw many others that were being worked up, and I feel sure the reproach

that used to be thrown at the Hybrid Teas for the paucity of crimson and scarlet varieties will soon be removed, especially when we have other raisers also working on these lines. Messrs. Hugh Dickson's Brilliant will also be a fine triumph of colour. A mass of it at Belmont last July was as effective as a bed of Geranium Paul Crampel.

It is a great advance to obtain Roses such as Red-letter Day, which combine vigour of growth with a free-blooming habit. There are many Roses free in growth, and in some respects too free, but they do not yield a corresponding amount of bloom. One cannot well use such Roses as



CLEMATIS ARMANDII, A NEW HARDY SPECIES FROM CHINA. THE FLOWERS ARE WHITE.

Hugh Dickson or J. B. Clark as bedders, and Grüss an Teplitz is most embarrassing in its growth, so that all who have had this difficulty to contend with will doubly welcome Red-letter Day.

The gardening profession knows no politics, but I am sure all readers will desire that by the time Red-letter Day is introduced in June, its advent may witness a real red-letter day in Ulster, its home, in that peace with honour will be acclaimed by all parties in that lovely portion of a very beautiful country.

DANECROFT.

TWO NEW HARD-WOODED PLANTS.

An Exquisite Semi-Double Prunus.—As described in our last issue under "New and Rare Plants," page 196, *Prunus Pissardii blirieana* flore pleno is a very beautiful plant, and quite distinct from the double form of the type. The branches are long and slender, with purple-tinted leafage, while the flowers are of a warm apple blossom pink and semi-double. It is a charming variety, valuable both for the decoration of tables and vases, and for garden effect in early spring.

Clematis Armandii.—The exceptionally high award of a first-class certificate was recently bestowed upon this Clematis by the Royal Horticultural Society. It is a hardy and very free-flowering climber of strong growth. A description of this Chinese species appeared in our last issue, page 196. The pure white flowers are borne in axillary clusters early in the season. As this species combines hardiness with other good qualities, it is a great acquisition to the genus, and will certainly be widely grown in the near future. The plant illustrated was shown by the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts.

YELLOW GLADIOLI.

OF the newest kinds of Gladioli, the yellows are, perhaps, most attractive, and though their prices are as yet a trifle high, they are well worthy of a place in every collection. Of lemon colours I found Niagara most dainty and charming, but it is easily affected by the acid, sooty nature of our atmosphere (near Glasgow). Canary Bird I grow also, but last season it did not succeed well for some unaccountable reason, although I had previously found it a very fine variety. Glory of Noordwijk is a magnificent flower, and of the first order as an exhibition bloom. The tint is a distinct chrome yellow that shows up well in a group and stands clear for a longtime. I have no hesitation in placing it first among all the yellow varieties. Golden Measure, one of Messrs. Kelway's introductions, is a good second in the class of ordinary

yellows, and as it is easier and cheaper to obtain, it may be more generally grown. It makes a fine spike for an exhibition group, and stands out prominently in a harmonious blending of tints on account of its purity and brightness. Yellow Beauty and Golden Girl are both stately and distinct yellow varieties. They succeed very well in Northern gardens. Of deep yellows with a decided orange tint there are two, Golden West and Sunset, both without rival in this class. Enthusiasts will find the above varieties among the very choicest and most charming kinds.

CRAIGIELEA

REASONABLE NOTES ON WATER AND WATER-SIDE PLANTS.

Thinning Out Dense Growth. The season is now be said to have fairly arrived when proceedings may be taken either to renew and replenish or to thin out such as are growing too luxuriantly. There is a considerable degree of tendency in the latter direction with such of the stronger-growing and other robust growers from among the many aquatic plants. These, if not occasionally thinned out, will exceed all reasonable bounds. In doing this the flowers of many *Nymphaeas* are really not seen at all, these being hidden under a mass of foliage; such, for instance, as *N. arifolia*, *N. M. rosea*, *N. M. albida*, *N. Collesia* and *N. Moorei*. These are all vigorous growers, and often push up a dense mass of foliage well above the water level. In rearranging such as these I have often pushed them out into deeper water, where they have done well. As much as 6 feet of water over them is none too much where they are living well.

All that one has to do just now is, first, to secure one or two pairs of waterproof waders, such as fishermen use in salmon and other rod fishing. Equipped with these, one can wade to a depth of 3 feet 6 inches of water safely enough, if needs be. It is advisable to lower the water, however, to a foot or so of the crowns when, with a good spade first to cut or divide the plants, and then one or two digging forks by which to lift them out of the mud, it is easy to secure strong divisions. These, as soon as possible, should be placed into ordinary nursery rounds, such as those seen in one of the illustrations; there is nothing better than these for re-establishing the plants after division. Secure baskets that are large enough for the purpose. Then place a layer of last season's leaves at the bottom, and upon that some good turfy loam and road dirt or river sand. On this place the lifted plants, with the crowns in all probability above the level of the top of the basket; then fill in all the interstices with the same kind of soil, making it all fairly firm. It will then be necessary to pass over some stout tarred string to keep the plant in position, otherwise a plant will float away of its own accord after being replaced in the water. By so doing, it then will be secure until the roots once more establish themselves in the mud. When baskets are not available, the divisions may be placed where they are to remain, being either pegged down or otherwise weighted down to prevent them from floating, some good soil being used as in the baskets. The baskets, I might add, can be pulled out into deeper water by passing a cord through the handles of the baskets and thus pulling them to their position; then the cord can be slipped out if it is double. In this way it is an easy matter to place them in 6 feet of water.

Some to be Let Alone.—When a plant is divided and not overcrowded, by all means let it alone. Of course, if the water is allowed to

attend to the larger and denser masses, it is just as well to place some good soil around these. Perhaps also a crown may be seen to be extending over the sides of a basket that was put in at some previous time. In such a case cut away the basket and pack up soil to attract fresh root action outside. Personally, I prefer old rather than new nursery rounds; these latter will often last sound too long for the real good of the plants.

Other Water Plants.—It will be noted in the illustration, to which I have already referred, that the water-side plants that grow in the shallow portion next to the edge are cut down. This is as it should be at this season of the year. It will now soon be a dense mass of growth again. Some such plants as *Typha latifolia*, *Glyceria aquatica* and *Acorus Calamus*—often grow much too freely and become too dense. Now is the time to thin these down with an unsparing hand. Many of the smaller-growing aquatic or sub-

mers thrive well. What we have done is to raise the soil in the water sufficiently high to plant them in this way: first, by placing brick rubble in the water up to its level, then filling in with some clinkers and ashes so that one can walk upon it without getting wet. Upon this the soil is placed and the plants put in straight away. *Senecio Clivorum* does well in the same position, so also do the *Gunneras*. By this method it is obvious that the roots percolate to the water and thus sustain themselves. To prevent the soil immediately in contact with the water from being washed away, it is well to place some rough pieces of tufted grass next to the edge. The effect of such groups as these when backed up by *Bamboos* is most pleasing and appropriate.

Some Other Aspects. Water gardening, when carried out in a judicious manner and with due regard to the surroundings, is most effective—such as that, for instance, in the larger illustration



WELL-GROWN SEEDLING WATER LILY.

aquatic plants require attention almost every spring to keep them as they should be. *Myosotis palustris* always, to my way of thinking, thrives better the first season after transplanting. *Butomus umbellatus* may remain for two or three years; then it will get too thick. *Caltha palustris* should be divided every other season. It is now just coming into flower with us. It ought to be much more extensively grown than it is, being very showy and lasting in flower for such a length of time. *Trollius europæus* is now in flower. If it needs division, wait until the flowering is over. *Aponogeton distachyon* may be transplanted at almost any season. It grows so freely and soon becomes re-established.

Other Water-side Plants.—Of these there are several most useful and highly ornamental subjects; for instance, the newer hybrid *Astilbes*, such as *A. Ceres*, *A. Venus*, *A. rubella* and *A. grandis*. If the soil in which these are planted is 6 inches to 1 foot above the water level, they

that accompanies this article. In the season the effect would be very fine; infinitely better, in my opinion, than any set design of flower beds. Here it will be also noted that the process of thinning out has been carried on, and by the use of the boat. One or two clumps in the foreground are showing indications of thinning out being required. In the illustration on this page an individual plant is depicted in good condition. This might require some such attention in a year or two. By the numerous letters of enquiry respecting Water Lilies that reach me from time to time, I find that many still continue to use wooden tubs for their cultivation. Nothing, in my opinion, is more irrational than this practice. It inevitably follows that the soil within these tubs becomes in time in a filthy, stinking condition, totally unfit for *Nymphaeas*, mud-lovers though they be. My advice is to never use tubs on any account. By this I mean a tub that is sunk under the water for aquatic plants. Neither do I, in the



THE BASKETS SHOWN ABOVE CONTAIN WATER LILIES AND ARE PLACED IN POSITION FOR PLANTING.

construction of rockwork, advise that pockets be prepared for water plants; these are equally as bad. If baskets are not used, the next best thing is to use loose bricks to keep the soil in its place.

New Water Lilies.—Of these there are a few most promising varieties that will be distributed this season. These are *N. Neptune*, of which the growth is described as being moderate, with flowers from 6 inches to 7 inches in diameter, and in colour white shaded with rose; *N. Gonnère*, best described as an improvement upon *N. tuberosa Richardsonii*, the colour white with the outer sepals shaded with green; and *N. René Gérard*, evidently one of the most robust growers and with flowers some 9 inches in diameter—the colour is given as bright rosy crimson. Of those first sent out last year, the best are *N. Fabiola*, pink and white; and *N. Gloire du Temple-sur-Lot*, which is a grand novelty, with a great multiplicity of petals, as many as 100 such having been counted. Two others are *N. Picciola* and *N. Sirius*.

JAMES HUDSON, V.M.H.

Gunnersbury House, Acton, W.

THE ENEMIES OF THE NARCISSUS.

(Continued from page 192.)

The Well-Known Narcissus Fly (*Merodon equestris*).—About this little new has to be said. The weight of authority seems to show that the initial point of attack, wherever the eggs may chance to be deposited, is at the base of the bulbs, and there the grubs in their earliest stage must be looked for. How very easily the grub in this stage may be overlooked is evidenced by the fact that, some years ago, the, I think, leading authority upon the subject, Mr.

P. D. Williams, sent to the Rev. W. Wilks twelve bulbs of *Narcissi* for examination; but the presence of the grub was not recognised. However, the bulbs were planted in pots, and, later on, were produced to the Narcissus committee of the Royal Horticultural Society, when no fewer than eleven out of the twelve were found to contain the larvæ of the *Merodon equestris*. Mr. Williams has demonstrated that the earliest presence of the larva can sometimes only be detected by the presence, at the base of the bulb, of "a tiny hole no larger than the head of a small pin." Professor Ritzema Bos has stated that soaking the bulbs in water before planting, for one, or, better, two days, will destroy most of the grubs, and, although this is disputed by some, it should be tried, as it does not injure the bulbs. I mean to submit all future new purchases, of expensive bulbs especially, to a season's quarantine away from the main bulb borders; and we are being driven to the conclusion that yearly lifting and replanting has become an actual necessity. Now we come to another, and perhaps the most serious, as it is the most insidious, enemy which afflicts the Narcissus, namely, the parasitic fungus known as

***Fusarium bulbigenum*.**—Little known in this country until the last few years, although it has existed in Holland for some considerable time, this fungus has assumed such proportions that, according to the statement of growers on a large scale, "entire plots of bulbs have been destroyed." This fungus is propagated by spores cast into the air, and also by mycelium in the ground. One does not want to be unduly alarmist, but, when such evidences of widespread destruction are brought before us by authority, it is clear that growers of the Narcissus must be on their guard. All available information as to this pest can be found in the *Kew Bulletin*, No. 8, 1913,

reprinted in *THE GARDEN*, December 6, 1913.

Other Enemies.—I must not lengthen this article by more than referring to the other enemies of the Narcissus—the swift moth (*Hepialus lupinus*), as to which see Mr. H. R. Darlington's able article in the Royal Horticultural Society's *Journal*, November, 1909; basal rot, if indeed it be, in fact, a specific disease, and not merely the outcome of other causes; yellow stripe, rust, eelworm, slugs, &c. A good deal might usefully be said about each of these, and, looking at the status which the Narcissus has achieved in the world of horticulture, and to the immense number of people now interested in the matter, the "Enemies of the Narcissus" would seem to be a fitting subject for a full consideration in the coming Royal Horticultural Society's "Daffodil Year Book" for 1914. Nothing could be more useful. Perhaps the editor, the Rev. J. Jacob, will give this his consideration.

Foot's Cray. CHARLES E. SHEA.

DAFFODIL NOTES.

VINCENT SQUARE,
APRIL 7.

DAFFADOWNDILLY was in town.

Here, there and everywhere, all over the hall, I kept meeting her. She regularly seemed to dominate the show. There were certainly twelve large groups, without counting small oddments scattered up and down in composite collections. I have no fewer than seventeen varieties down in my notes as having been brought before the Narcissus committee, and I am not sure that I have not omitted one or two of the unfortunates who were "passed," which is the usual official formula uttered by the chairman to signify unsuccessful candidature for honours. Seedlings, especially yellow trumpets, naturally were a very conspicuous feature; in fact, I think they were a little overdone. After all, the general gardener wants something where-with he can ornament his garden, and a single bulb or a small stock of four or five, let us say, does not go far—except, more than likely, in depleting his purse, for such luxuries are like the first plovers' eggs on the market, decidedly expensive. Hence I welcome such an exhibit as that of Suttons, which displayed in an attractive manner many of the more ordinary varieties which we specialists are apt to ignore and forget. Those who more or less come under the category are relatively only a small number, and it is among these alone that there is any considerable demand for the higher-priced novelties.

If I appear somewhat to discount what I have just said by now writing mainly from a show point of view, it is only because I consider catalogue time a more convenient and useful one for discussing the merits and demerits of "stock" kinds. I am writing these notes at the home of Mr. W. F. M. Copeland at Shirley, which is a suburb of Southampton, and where a very cursory trot round a large, old-fashioned garden soon showed me that he is as keen on seedling-raising here as he was at his old home near Stone, and

that we are about to have Shirley Daffodils as we already have Shirley Poppies. I wish all his great range of doubles—Vulcan, Gollywog, Rags and Tatters, Whirligig, &c.—had been raised here; “Shirley Doubles” would have been so handy and euphonious a title.

Royal Sovereign, which gained an award of merit, is one of his latest productions. It is of medium size and loosely built, after the style of Argent. The perianth is white, and the pale lemon corona is not so divided or spread about as is usual. It gives the idea of a lot of short bits punched, and then opened out at the top and caught together at the bottom. It is a cross between Minnie Hume and Telamonius plenus.

Tintoretto, another new double, with deep primrose and orange red colouring, was among those which kept it company on Messrs. Cartwright and Goodwin's stand. It is another even more loosely built bloom, with many bits of primrose perianth in evidence round and among the red-edged, deep orange, broad and boldly split corona. As I journeyed down here in the train, I thought of all the wealth of flowers that had passed under my review during the day, and tried to single out the best. When the time came for gathering up our belongings, I had come to the conclusion that Crystalline, Florist's Favourite, White Maximus, Vauban, The Marquis, Maid of Honour, Vacuna and (to include an older one) Midas were certainly not to be omitted; so perhaps I had better, without more ado, proceed to describe them.

Crystalline (R. H. Bath) is a pure white Leedsii of the long, rather narrow segmented type, with a delicate-looking cup of narrow diameter, fringed or fluted at the top in such a way that I was reminded of The Fawn. It is not very often that I see a flower that I like so

much, and I do not wonder that the tiny stock is to be “grown on” before any bulbs sold out to the public. Dimensions, *à la* Sydenham: $3\frac{7}{8}$ inches \times ($1\frac{1}{8}$ inches \times $1\frac{1}{8}$ inches) \times ($1\frac{1}{2}$ inches \times seven-eighths of an inch).

Florist's Favourite, a transfer from Dinton, was on Mr. Bourne's stand, and although it was surrounded on its circular dais by such beauties as Queen of Hearts, Bernardino and The Earl (yellow Ajax), it seemed to stand there like a king among them, ready to receive the homage of delighted florists. It is a rich deep yellow bloom, with a stiff, flat, widely segmented perianth, which is set at right angles to the trumpet, which in turn is short, wide and nicely recurved at the brim. It is well named, for it is a very “floristy” flower, and is bound to be a favourite among the show fraternity. Size: $4\frac{1}{4}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{3}{8}$ inches) \times ($1\frac{1}{2}$ inches \times 2 inches).

White Maximus (W. T. Ware) features in its general appearance its well-known namesake, although if each part were to be taken separately and compared, there would be found many differences in detail. It is a loosely built, large and long stalked pale bicolor trumpet. Although of ample width, the segments are long and pointed, with a graceful twist in three of them. The trumpet looks longer than it really is, owing, I think, partly to it not being over wide in diameter and partly to the arrangement of the petals, which allows one to see its whole length so clearly and easily. Size: $4\frac{3}{4}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{7}{8}$ inches) \times ($1\frac{1}{4}$ inches \times 2 inches).

Vauban (Wilson) is an exceedingly fine, handsome, deep yellow giant incomparabilis, raised by the exhibitor himself. The large, somewhat straight-looking cup is a decided orange yellow, and is distinguished by the wide scalloping of its brim. The broad, stiff petals are a little turned in

at their very edge. This is a feature which seems to be “coming along,” but which, just at present, is uncommon. It is a totally different thing from the incurving that we know so well in old Frank Miles or The Doctor, being confined to the very edge, like we see it in many Darwin and florist Tulips. Measurements: $4\frac{1}{2}$ inches \times ($1\frac{1}{4}$ inches \times $1\frac{1}{8}$ inches) \times ($1\frac{1}{8}$ inches \times $1\frac{1}{2}$ inches). I would like to take this opportunity, while writing of a flower in Mr. Wilson's collection, to say that I made a mistake in saying in my notes of April 4 that the lovely Poetaz Rubellite was raised by P. D. Williams; it should have been by J. C. Williams.

The Marquis (R. H. Bath) is a very refined, deep yellow Ajax—practically a self—distinguished by the rich, sleek texture of its flat, right-angled perianth and its shapely trumpet. The specimens on the stand were oldish blooms, but age had made no ravages in its beautiful appearance. The flowers are borne on long, stiff stems. Like Vauban, it was raised by the exhibitor. Dimensions: $4\frac{1}{4}$ inches \times ($1\frac{1}{2}$ inches \times $1\frac{1}{4}$ inches) \times (2 inches \times $1\frac{1}{4}$ inches).

Maid of Honour (Chapman).—I often envy Mr. Chapman's intimacy with the late Rev. G. P. Haydon, for in him he was associated with a great character, and “characters” are invariably interesting people. I have always been told that Mr. Haydon was a man of very sudden impulses. One moment he would pour on you the full vials of his wrath, but a second after the sun would shine and he would be as jolly as a sandboy, and nothing that he could do for you would be too much. One day a generous impulse seized him when Mr. Chapman was in his garden, when, as it so happened, they were looking at a dainty little white (or *very* pale bicolor) trumpet. “You like it, do you? Well, it is yours. I give it you.”



AN EFFECTIVE GROUPING OF CHOICE WATER LILIES.

That is the history of how the fascinating Maid of Honour came to be one of the three best—if not *the* best—things in this interesting seedling collection on this particular date. It is a little like Mrs. Robert Sydenham. Size: $3\frac{3}{8}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{1}{2}$ inches) \times ($1\frac{3}{8}$ inches \times $1\frac{1}{2}$ inches).

Vacuna (Barr) seemed to me to stand out among the group of new home-raised seedlings, although many good judges considered an unnamed Giant Leedsii (No. 1276) to be a better flower. The reason that I differed from them was that I thought the perianth was too large in proportion to the size of the cup. Vacuna may be described as a massive pale bicolor Ajax, quite away from such varieties as Averil, Cygnet or Florence Pearson, inasmuch as there is very little recurve in the brim of the somewhat wide trumpet. There seems to be an opening for this type. Measurements: $4\frac{3}{8}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{3}{8}$ inches) \times (2 inches \times $1\frac{3}{8}$ inches).

Midas (Wilson) is one of the many beautiful flowers that have been raised by Mr. J. C. Williams. It is also one of the exceedingly large progeny of that great giver of "good things," Princess Mary. It has a well-formed, imbricated, white, reflexing perianth of much substance, with a large, palish yellow cup, edged with a narrow band of red. Measurements: $3\frac{1}{2}$ inches \times $1\frac{1}{2}$ inches. I call it a restful flower, which very much belies the appearance that its name suggests.

Among some of the other flowers which caught my eye on my tour of the hall were Glyngarth, a sturdy bicolor giant incomparabilis; Veronique, a pure white, loosely built Leedsii of much distinction; Tantalus, an old type Giant Leedsii, which received an award as a cut flower; Elgiva, a Barrii with a very uncommon coloured ruddy buff cup; and Queen Primrose, a pale squat trumpet $4\frac{3}{8}$ inches ($1\frac{3}{8}$ inches \times $1\frac{5}{8}$ inches) \times ($1\frac{1}{2}$ inches \times $1\frac{7}{8}$ inches). JOSEPH JACOB.

SEASONABLE NOTES ON VEGETABLES.

Runner Beans.—Make a sowing in a box in a cool house for an early crop. Directly the plants are above the soil, remove to a cold frame to induce a hardy, stocky growth, which will much facilitate progress when the plants are put out.

French Beans.—Sow half-a-dozen Beans in a 4-inch pot in a cool house, to be transferred to 8-inch pots later on for growing in a cold frame for successional supplies. In a week or ten days time a sowing should be made in the open on a warm border if the soil is of a light character; if heavy, sow in pots in a cold frame for planting out later.

Broad Beans.—A final sowing in the open should be made for the latest crop, although one still later can be made where Beans quite small are required for special use.

Onions.—The plants sown under glass and grown on in boxes will now require planting into their permanent quarters. The ground

having been finally forked over after giving a dressing of soot and wood-ashes, with a sprinkle of lime, choose a dry day to rake over the surface and mark out the rows. If these are to be in beds with an alley between, allow 2 feet for the latter. The beds may be 6 feet or 10 feet wide, according to the number of plants required; 15 inches between the rows will suffice, and 13 inches from plant to plant. Lift the plants carefully with a trowel, retaining a good ball of soil to each, so that the plants will receive little or no check to growth. Do not bury the bulb, but keep it on a level with the soil. Should the weather be dry at planting-time, gently water the plants in to induce a quick root action.



NARCISSUS CRYSTALLINE, A PURE WHITE VARIETY OF THE LEEDSII GROUP, WITH A FRILLED TRUMPET.

Afterwards keep the soil moved between the rows, and occasionally dust the plants over with soot.

Peas.—Sow now, for use in August and September, varieties like Duke of Albany, Alderman, Quite Content or Superlative. Do not sow the seeds nearer than 3 inches apart; this allows ample room for a full development of the haulm, without which good pods cannot be secured. If the ground was well manured and deeply dug or, better, trenched, nothing beyond a forking over now in dry weather will be required before drawing drills 4 inches deep for the seeds. Should the weather be dry, well soak the bottom of the drills before sowing, which hastens germination considerably. Keep a sharp look-out for mice, which, if numerous, will quickly spoil the row by eating

the seeds. Nothing is better for clearing these pests than two ordinary bricks, one stood on edge, the other canted on its edge, so that it is propped up to the other brick by a piece of stiff wire 2 inches long, baited with toasted cheese.

Leeks should now be planted from the pots or boxes in which they were raised into trenches taken out 2 feet deep and 18 inches wide. The bottom of the trench should be broken up at least 6 inches deep. On this place a layer of half-decayed farmyard manure at least 4 inches deep; then a layer of old potting soil, into which the plants are transferred from the pots or boxes with a good ball of soil attached to the roots. If the weather is dry, give a good watering after planting, also make sure that the plants are sufficiently moist at the roots before planting.

Carrots.—Make successional sowings thinly in rows 15 inches apart for the strong-growing varieties like the Intermediate type. For the Horn varieties a foot between the rows is ample. Thin and hoe among plants well above the soil.

Brussels Sprouts from the second sowing should be planted out as fast as the plants are ready. It is a mistake to allow the plants to become drawn up weakly in the seed-bed. Plants 4 inches high are large enough, as at that stage they plant with less fear of a check. Too often the seed is sown too thickly, which means weakly plants. It is far better, when there is a risk of this being so, to thin out the weaker-growing plants in the beds, as this allows more space for the remainder.

Salsify should be sown in drills 15 inches wide. If the soil is heavy or stony, make holes with an iron bar at least 2 feet deep to ensure straight roots, as when the seedlings meet with obstructions, as stones or hard clods, they make fangs, and are not suitable for cooking, apart from appearance. In sandy soil this trouble is not experienced.

Sowing seeds such as Broccoli, Cabbage, &c., in the open in beds is at times difficult to accomplish satisfactorily, owing to drought, which often prevails during April and May, when many vegetable seeds should be sown. It is a common practice with the uninitiated to sow the seeds and water the beds afterwards, which creates a crust on the surface, making it difficult for the tiny seedlings to push through. The best way to ensure success is to dig over the beds roughly and give the soil a thorough soaking the day before sowing the seed, and shade them with mats to prevent the too rapid evaporation of the moisture from the soil by the sun's rays, assuming, of course, the weather is hot and dry at the time. The next day the clods will easily fall to pieces. The seed can be sown and lightly covered with some old potting soil, again applying the shading until the plants are coming through the surface, when it should be gradually removed, affording light and air to induce a stocky growth. Lettuce should be sown every fortnight in drills where the plants are to remain, thinning out the plants as soon as large enough to handle, and planting in other drills previously watered.

Swanmore.

E. MOLYNEUX.

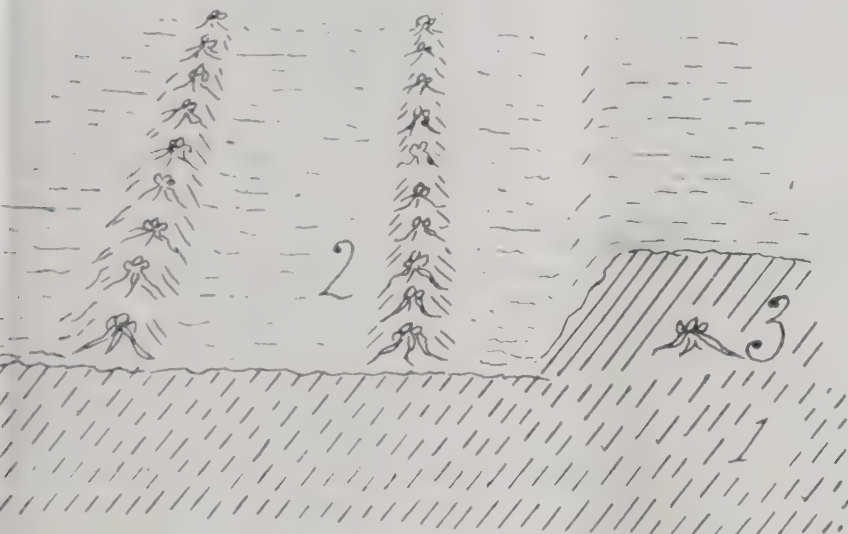
GARDENING FOR BEGINNERS.

HOW TO RAISE AND GROW ASPARAGUS.

naturally light soils very fine crops of asparagus can be grown without much trouble. The expense is not great, but the cultivator must

opening material may be put in, as the trenching proceeds, where the drainage is poor. Do not bury such material too deeply—18 inches below the surface will do nicely.

Planting.—In cold soils and in the Northern Counties the end of this month will be soon enough to put in plants or seeds. In the Southern Counties and where the soil is naturally light, the middle of the month will do. On a fine day, and where the ground is dry, fork up the surface soil and leave the subsoil, represented by No. 1 in Fig. A, undisturbed. Then form shallow ridges, as shown at No. 2, 18 inches apart; these ridges need not be more than 3 inches or 4 inches high. On them carefully place the young plants so that their roots may be evenly spread out, as shown. Strong two



—DIAGRAM TO ILLUSTRATE THE PLANTING OF ASPARAGUS. NOTE THAT THE PLANTS ARE ON SMALL RIDGES BEFORE BEING COVERED.

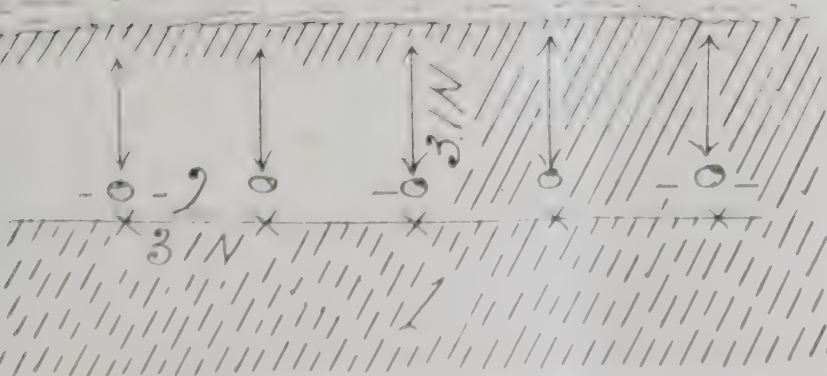
prepared to wait at least two years before he can reap remunerative crops, as it is very unwise to use Asparagus before it is strong enough to withstand the cutting. Both heavy and light soils must be deeply trenched before seeds or plants are put in, as, once established, the plants remain for many years, and the cultivator has no opportunity afterwards of making good any defect in the formation of the beds below the surface. Only top treatment can be given after the plants are growing. If the soil is light and sandy, form the beds in a position where the ground is quite flat, if this is convenient; but if it is heavy and retentive of moisture, then select a plot having a gentle slope, if one is available.

Trenching and Manuring.—The work of trenching should be done in the autumn or winter, convenient, and in the case of clayey land the manure may be put in then; but when dealing with light soils, add the manure in February or early in March by simply forking it in the surface, turning over the soil on it and leaving the top portion as rough as possible. In every case break up the subsoil well. Broken bricks and similar

year old crowns are the best to plant, and they must have a space of about nine inches between them in the rows. Do not allow the roots and crowns to be unduly dried by long exposure to the air, but get them covered up with soil as quickly as possible. No. 3 shows the crowns covered and that portion of the bed finished off.

Sowing.—The same preparation of the soil is necessary as in the case of planting roots, only it will be well to make the surface portion somewhat finer. No. 1, Fig. B, shows the subsoil containing also the rotted manure. Drills must be opened 18 inches apart and 3 inches deep. No. 2 shows the seeds dropped 3 inches apart in the drills and covered 3 inches deep. Rather deep sowing is much better than shallow sowing, because the seeds germinate better at this season, when surface soils quickly dry up, and if the resultant plants are to remain permanently in that position, when cut the "grass" is much finer than after shallow sowing. Every other seedling in the row may be pulled out, if all seeds germinate, while quite small. This and the keeping down of all seedling weeds is all the work needed to be done the first summer. The "grass" must be cut down to within 2 inches of the soil when it is matured in the autumn.

Weakly Roots and Strong Ones.—No. 1 in Fig. C shows a weakly root and crown; the growth resulting from such is shown at No. 3. No. 2 represents a strong crown, possessing plenty of fleshy roots; such plants produce very satisfactory growths, similar to that shown at No. 4. If a period of dry weather comes, do not hesitate to water the young plants freely.



—HOW TO SOW SEEDS OF ASPARAGUS. THEY ARE PLACED 3 INCHES APART AND 3 INCHES DEEP, IN ROWS 18 INCHES ASUNDER.

HOW TO GROW SWEET WILLIAMS.

THESE old-fashioned flowers are again attracting a good deal of attention, and rightly so, for they are showy hardy biennials of the easiest possible culture. To secure a good display next year, seeds ought to be sown within the next few weeks. They may be sown either in the open ground or in pans. The latter method is preferable, and germination takes place quicker and more regular. Pans or boxes of suitable dimensions should be selected and partly filled with drainage, over which is placed a thin layer of moss or rough material to secure a free passage for water. A mixture of loam and leaf-mould put through a quarter-inch mesh sieve is an excellent compost, and the seed ought not to be covered too deeply. Place the pans in a cold frame, and when two or three leaves are made, the seedlings may be pricked out.



C.—POOR CROWNS AND GROWTHS CONTRASTED WITH THOSE THAT HAVE HAD GOOD TREATMENT.

into nursery beds till the autumn, unless their flowering site is available, when they are best planted direct into it. Frequently, however, they must go to a spare bed, whence they are lifted early in October and replanted where they are to flower. Thoroughly drained soil is essential, as the plants are liable to suffer in wet soil during the winter.

Sweet Williams are well suited for shrubby borders, masses in beds, the herbaceous borders and, in fact, almost anywhere that the soil is reasonably good. For most amateurs a good mixed strain is best if purchased from a reliable seedsman; but for those who desire distinct shades I would suggest Pink Beauty (which has delicate pink flowers), Scarlet Beauty and Dark Crimson. Then there is the Auricula-eyed variety, which possess rich colours, with a white eye and margin.

G. G.

S

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Houses.

Fig Trees in Borders require careful stopping and thinning. Remove weak growths before the trees become crowded, and stop side shoots at a few eyes beyond the fruits which are swelling. Do not allow the borders to become too dry, or many of the fruits will drop; 65° at night will be quite high enough.

Early Permanent Vines.—If started at the beginning of December, the Grapes will now be colouring. The border should be examined, and, if at all dry, a good watering of weak liquid manure should be applied before the crop is too far advanced. If this can be obtained from the farmyard and diluted with warm water until it is of the required temperature, so much the better. A good sprinkling of soot may also be applied with advantage.

Tomatoes.—Plants from which ripe fruits are being gathered should be given an occasional top-dressing of artificial manure. Confine the plants to single stems by the removal of all side shoots as they appear, and do not allow them to suffer from want of water at the roots. Early spring-sown plants will now be setting their fruits, and should be frequently top-dressed with fine loam in which a quantity of artificial manure has been mixed, and this should be pressed tightly on the surface of the soil. Ventilate freely and keep the foliage well thinned, removing all side shoots as they appear. When a sufficient crop is set, the leading point may be removed from the plants and frequent waterings of liquid manure given. A night temperature of 65° or 70° will suit them well.

Plants Under Glass.

Perpetual-Flowering Carnations which have been flowering throughout the winter and spring may now be removed to some spare pit or shelter in order to prepare them for planting in the open. If these plants are carefully tied to wires or strong sticks, they will produce a quantity of useful flowers in the autumn; but they must never be allowed to become too dry at the roots.

Young Carnation Plants which were struck in December should now be ready for potting into 6-inch pots. Keep the pit moderately close until fresh roots are made, after which the plants must be freely ventilated to keep them from becoming drawn.

Cinerarias.—A small sowing may now be made to produce an early batch of plants. Sow in clean pans of sifted loam and leaf-soil, make moderately firm and sow thinly, covering very lightly with fine soil. When large enough to handle, the young plants should be placed singly in small pots and shaded from strong sun throughout the season. The most suitable position is a cool pit facing north, and the pots should stand on a good bed of ashes within 15 inches of the roof glass.

The Flower Garden.

Tuberous Begonias.—If these have been gently started in boxes, they should now be parted with a sharp knife and potted into 4-inch pots. Place them in a warm pit quite near the glass, but avoid forcing after they are established, for it should be remembered that the sturdier the plants are at bedding-out-time the better will be the results.

Mignonette.—Several sowings of this sweet-smelling plant should be made during the season. The ground should be deeply dug and a good dressing of old manure incorporated with the soil, also a quantity of sifted mortar rubble. When large enough the plants should be freely thinned. It is necessary to make the soil firm before the seeds are sown.

Border Chrysanthemums should be planted out without delay. In order to ensure the best results, these plants should be stopped and thinned out as it becomes necessary. Keep the shoots tied to neat sticks, and never allow them to become overcrowded.

The Hardy Fruit Garden.

Cherries.—As soon as the trees have set their fruit, careful attention should be given to the

destruction of green or black fly, which is almost certain to be present on the young shoots. Syringe the trees with some insecticide as often as it may be necessary, to keep these pests in check. Disbudding should be attended to before the shoots become overcrowded, in order to avoid severe pruning during the winter.

Mulching.—Fruit trees on south walls should receive a good mulching of farmyard manure before the season is too far advanced. The soil should be lightly broken up with the points of a digging fork before the mulching is given, and this should be applied to newly planted trees either on walls or in the open garden. No great quantity of manure should be used so early in the season, as this has a choking effect on the soil; and if mulching is intended for the supply of food as well as a protection from strong sun, the material should be of a rich, stimulating nature.

The Kitchen Garden.

Carrots.—The principal sowing of Carrots should be made as soon as the soil is in working order. Sow in shallow drills a foot apart, and cover lightly with fine soil. As soon as large enough, the seedlings may be thinned to 6 inches apart. Frequent dustings of soot should be applied during the season.

French Beans in pots should be freely watered with liquid manure. Pick the pods as soon as they are large enough for use, and if necessary they may be kept for a few days in a cool cellar. Sowings may now be made in cold pits for the supply of pods at the end of June. If seeds of Dwarf Beans are planted under a south wall, they will be of great value as a succession to those grown under glass.

Runner Beans.—A sowing of Scarlet Runner Beans may be made now in boxes or 4-inch pots, and placed in a cold pit to produce plants for planting in trenches in the open garden about the third week in May. Plants raised in this way have the advantage of protection from rough weather, and may be expected to come into bearing ten days before those sown in the open.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Celery.—The main crop should now be ready for pricking out, and where only a moderate quantity is required, this may be done in boxes. They should then be placed in a vinery for a time, at least until it is safe to place the plants in frames. Where a large quantity is needed, they may be pricked into frames right away and well protected during cold nights. The trenches should now be prepared for planting, and where possible they should run north and south. The plants must have a rich soil; indeed, it is almost impossible to overdo them in this respect.

Kidney Beans.—A small sowing may now be made on a warm border. With this important crop one has to take a great many risks. If the summer happens to be cold and wet, it is next to impossible to get a crop, more particularly in the North. It will be wise to make a sowing in small pots. The seedlings can be planted out about the second or third week in May. But the safest plan is to make a sowing in some of the cold frames after the bedding plants have been taken out.

Turnip-Rooted Beet.—Seeds may now be sown in lines in an early border. The roots will be much appreciated for the earlier supplies of salads. The sowing of the main crop had better be deferred for at least another week or so.

The Flower Garden.

Dahlias.—As soon as a sufficient stock of cuttings has been secured, place the old tubers in frames. These will be found handy to plant among the herbaceous plants or mixed borders. Treated in this way, they make large specimens and are very effective in the late autumn.

Canterbury Bells and Sweet Williams.—These should be placed in their flowering quarters without delay. It will be as well not to plant

in very large patches, as this would leave some nasty blanks after they had gone out of flower. I find it is a good practice to plant some Montbretia bulbs among them, which will take the place of the former when out of bloom.

Gladioli.—Where it is the practice to plant these without being started, no time should be lost in getting the bulbs out. Should the soil be of a heavy nature, it will be advisable to put a little sand in with each bulb, and see that they are planted at least 4 inches deep.

Early Flowering Chrysanthemums.—Old plants which provided cuttings for the season's stock should not altogether be discarded. These will be found to be extremely useful for giving an early supply of flowers, either planted in some odd corner or in the mixed border. The young plants should now be fully exposed to the weather, and planted out as soon as they are sufficiently hardened. They may be pinched now or after they have obtained a start.

Bedding Plants.—All plants which have been grown in heat should be placed in frames as soon as possible. Half-hardy annuals grown in boxes often receive a check through neglect in watering, so that it will be wise to plant them out as soon as it is reasonably safe. Besides, it relieves the pressure later when there is so much to see to.

Yews.—The clipping of Yew hedges or the more ornate specimens may now be proceeded with. Even at this date they will most likely assume a rather yellowish hue. Still, with the increased warmth they soon recover. Where one has a hedge that does not seem to be particularly happy, it will be found that in most cases the plants are suffering from poverty. In such instances apply a good dressing of rich farmyard manure, and if this is at all unsightly, it can be covered with a little soil.

Plants Under Glass.

Deutzias.—Plants that have been forced will now be passing out of bloom, and should have the old wood cut back to encourage the young growth. As soon as growth commences, they should be repotted and kept growing on in moderate heat until growth is completed, when they ought to be stood out of doors. Plants that have not been repotted must have frequent applications of manure-water. If it is intended to increase the stock, cuttings should be taken off and rooted singly in small pots. These will make useful little flowering plants for next season.

Primula sinensis.—Where plants are required for early flowering, a small sowing may be made now, and as Primulas do not, as a rule, germinate freely, a little extra care will repay the grower. The seed-pans should be well drained and filled with a mixture of about equal parts loam and leaf-soil, with a little sand. The pans should be watered before sowing and allowed to drain. Sow the seeds thinly, cover with a piece of glass, and place in a moderate temperature. They should never on any account be grown in too much heat.

Winter-Flowering Pelargoniums.—A good batch of cuttings should now be rooted for supplying plants to bloom in early winter. These should be grown on in 6-inch pots and kept in frames fully exposed to the sun. The flowers must be pinched off as they appear until the end of August or the beginning of September, by which time the plants should be good specimens. House them not later than the end of September.

Fruits Under Glass.

Grapes Shank.—Although one does not expect Grapes to shank at this early stage, still, it is usually in the earlier stages that the damage is done. One of the principal causes of shanking is that the Vines are planted in too rich a soil, causing them to grow on late in the season; these late roots usually rot, which causes an unequal balance between top and root. Another cause is flagrant neglect of atmospheric conditions. Roots either too wet or too dry, and especially roots that have gone down and away from the influence of the sun; denuding Vines of large quantities of foliage at one time, which causes a severe check; and overcropping are other factors that tend to bring about shanking.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice. The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be early and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on a business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEAS IN GRASS LAND (H. H.).—We do not see any reason why Sweet Peas cannot be grown in grass land, providing you make the holes a yard in diameter and break up the soil 2 feet deep. Of course, everything will depend on the character of the soil and the treatment plants are given afterwards. You did not, unfortunately, tell us any idea as to what you have done, or in what part of the country you are living.

DAFFODILS NOT FLOWERING (W. Watts).—We think it is quite probable that the reason why your Emperor daffodils are not flowering better is overcrowding. These daffodils increase very rapidly in most gardens, and the bulbs need lifting and thinning every other year to do well. Your best plan will be to lift all the bulbs this year when the foliage has naturally died down, separate them, and plant the strongest in the bed that you wish to have plenty of flowers in next spring. The smallest of them could be planted in a bed of good soil in some other part of the garden, and after having a year there would, no doubt, attain flowering size.

SOWING NYMPHÆA SEED (Winner).—Your Nymphæa seed had better be sown indoors. Place a shallow tub or tank on the stage of a warm greenhouse where it will be exposed to the sun. Then sow the seeds thinly in pans, singly in small pots, filled with loamy soil. Cover the seeds with about a quarter of an inch of compost. The pots or pans must then be stood in the tub or tank so that they are covered by from half an inch to an inch of water. Change a little of the water daily if no means can be found for allowing a little of the water to be continually running in and out. The seedlings ought to appear in a few weeks' time, and if in pans they must be potted singly as soon as they are large enough to handle. Plant the water out of doors when several leaves have been formed and the plants are fairly vigorous. It may be necessary to repot them into 5-inch pots first.

WHERE TO OBTAIN VARIOUS PLANTS (Solent).—Of the several subjects concerning which you enquire, *Alvia involucreta* Bethellii is generally known in gardens and nurseries as *S. Bethellii*; *Chironia linoidea* is usually known as *C. ixifera*; and *Pentas carnea* is a well-known love plant. Any nurseryman who makes a speciality of stove and greenhouse plants should be able to supply these. Apply to Messrs. James Veitch and Sons, Chelsea, or to Messrs. Stuart Low and Co., Bush Hill Park, Enfield. *Encelia Heritieri* is rarely seen outside of a botanic garden, but one of the above firms might keep it in stock. *Calceolaria Forgetii* was introduced by Messrs. Sander of St. Albans, and no doubt they could supply it. For the *verbascums* and rockwork plants, send to Messrs. John Waterer, Son, and Crisp, Wargrave Plant Farm, Twyford, Berks, or Messrs. Thomas Ware and Co., Feltham, Middlesex. Where any particular firm does not stock the plant required after, they will, as a rule, obtain it if possible.

THE GREENHOUSE.

ALPINE HOUSE (Sheffield).—If you cannot find any better position than under the Silver Birch tree, we should

advise you to abandon the idea of growing alpine, and take up choice hardy Ferns instead. One of the essentials to success with alpine under glass is unrestricted light, which nothing short of an open position can ensure. This is even more important when, as in your case, there is some idea of permanent planting. Then, it would appear that the house would have to be of a lean-to character, which also is not good. The best type of house is span-roofed; the best position an entirely open one, which permits of ventilation on all sides as well as the roof. The plants should be grown in pots and pans, preferably in frames or on a bed of ashes in the open in the summer, and taken into the house in autumn. The size of such a house is optional to its owner; it may be a dozen feet long or thrice that length, while a width of 10 feet would serve for all. If soil and stone were used on the staging, the latter would have to be of a substantial character. They are not essential. In the circumstances, we think you had better consider the matter and then write us again.

FRUIT GARDEN.

WIRES ON WALLS FOR FRUIT TREES (G. K. M.).—Yes; wire the walls for the fruit trees. It is possible to fix the wires about half an inch away from the wall, and this will be quite close enough for the branches. When the wires are fixed several inches from the wall, there is a cold current of air passing behind the branches and young foliage, and, in the case of Peaches and Nectarines, in some exposed gardens, leaf blister is then more prevalent. The branches can be kept from direct contact with the wires by twisting the tying material once or twice as you suggest.

MISCELLANEOUS.

ADMISSION TO THE CHELSEA SHOW (New Reader).—The spring show of the Royal Horticultural Society, to be held at Chelsea on May 19, 20 and 21, will be open to the public on Tuesday, May 19, from 12 noon to 6 p.m., admission 10s.; from 6 p.m. to 8 p.m., 2s. 6d. On Wednesday, May 20, from 7 a.m. to 6 p.m., 2s. 6d.; from 6 p.m. to 8 p.m., 1s. On Thursday, May 21, from 7 a.m. to 6 p.m., 1s. At 6 o'clock on this day the show closes. After your *Calceolarias* have done flowering in pots, we do not think they would give any satisfaction if planted out in the garden.

VARIOUS QUESTIONS (A. D.).—The two plants sent for identification are: (a) *Chionodoxa Lucilia*, flowers developed somewhat abnormally; (b) *Pieris floribunda*. The Rose leaves appear to be affected by a fungus disease known as the rose-leaf blotch (*Actinonema rosæ*), but it has not developed sufficiently for correct identification. Spray the plant with a weak solution of potassium permanganate, and, as the leaves fall, collect them promptly and burn them at once. These precautions will probably act as a preventive against the disease appearing another year. The *Rhododendron* leaf is suffering from the presence of thrips, small black insects which prey upon leaves of many indoor plants. They are encouraged by a dry, close atmosphere and improper cultural conditions generally. Fumigate the house with a nicotine preparation once a fortnight, and sponge the leaves now and then with soft-soap water.

NAMES OF PLANTS.—*J. C., Ireland.*—*Narcissus J. B. M. Camm.*—*J. R. D.*—1, *Anemone blanda*; 2, *Chionodoxa Lucilia gigantea*.—*Mrs. S., Holmbury St. Mary.*—Yes; the pink flower is *Andromeda polifolia*; the pale *Anemone* is *A. apennina*; the smaller and deeper flower is *Anemone blanda*.

BOOKS.

The Rose Annual.—The Council of the National Rose Society are to be heartily congratulated on the exceedingly interesting and useful volume now before us. When we remember that this is only one of several publications that members receive, in addition to admission tickets to all the society's shows, it is not difficult to understand the phenomenal increase in membership year by year. Certainly this year's Annual is the best the society has ever published, and it is packed with interesting letterpress and illustrations from cover to cover. Those who are interested in French Roses will read with great pleasure M. Jules Gravereaux's descriptive account of his famous Rose garden at the village of l'Hay. As president of the French Rose Society he is rightly regarded as the leading amateur rosarian in France, and we thank him for placing on record so charming a description of his garden. The classification of Roses is becoming a serious problem, and we expected to find something relating to it in the Annual. Nor are we disappointed. Mr.

Alex. Dickson of Belfast, Mr. W. Easlea, Mr. Peter Lambert, Mr. George Paul, V.M.H., the Rev. J. H. Pemberton, Mr. A. E. Prince, Mr. G. M. Taylor, Dr. A. H. Williams and Mr. George Gordon, V.M.H., all offer suggestions for the rearrangement of our various classes of Roses, and doubtless the Council will be able to derive from these a basis on which to work. We hope to be able to deal with this subject more fully at a later date. Autumn-flowering pillar Roses, for which there is naturally a large demand, are fully dealt with by Mr. H. R. Darlington, and Mr. Pierre Guillot gives some very interesting information about the use of the Rose in the ornamentation of the garden. Then comes a most interesting article on the production of new varieties, by Dr. A. H. Williams. This is splendidly illustrated, and gives the novice some very valuable information about hybridisation and crossing, and the ripening, storing and sowing of seed. Mildew and black spot receive attention from Mr. M. A. Bailey, B.A.; black spot from Mr. H. R. Darlington, who, we believe, has been troubled a good deal with it among his Roses; and Mr. George G. Hamilton puts forward some rather startling ideas about the prevention of fungoid diseases from a surgeon's point of view. Diseases also receive attention from the Rev. F. Page-Roberts and Dr. A. R. Waddell. Mrs. H. R. Darlington, who always seems to have something fresh to say about Roses, and who has the gift of saying it in such an interesting way, gives particulars of the lasting qualities of cut Roses, a subject that is of more than ordinary interest to thousands of rosarians. Dr. H. T. Hinton gives some useful information about chlorosis, or the yellowing of foliage, and Mr. Courtney Page discourses on the budding of Roses, a subject that is always of considerable interest to amateurs. This article is fully illustrated, and is of a highly practical character. "How to Treat Roses the First Year after Planting" is the title of a useful article by Dr. C. Lamplough, while Mr. H. E. Molyneux, whose notes on newer Roses are so highly appreciated by our readers, deals fully with the new seedling Roses of 1913. The illustrations, a number of them in colour, are very interesting and good, and we advise all our readers who are not members of the National Rose Society to purchase a copy of this Annual. It can be had for 2s. 6d. post free from the hon. secretary, Mr. E. Mawley, Rosebank, Berkhamsted; or, better still, send Mr. Mawley 10s. 6d. and become a member of the society, and so secure all the privileges that are extended to members.

THE EDITOR'S TABLE.

Blue Primroses and Polyanthus from Ireland.—Mr. J. W. Brasier-Creagh, Creagh Castle, Doneraile, County Cork, sends some very fine flowers of blue Primroses in two shades of that colour. One, which is particularly charming, is a very large flower of rich blue with a well-defined yellow eye, while the other is deep violet of a velvety texture. In addition, we were very pleased to find some good blue Polyanthus, the best of their kind we have seen. Accompanying these interesting flowers were some wonderful St. Brigid Anemones, grown only as they can be grown in the moist and genial climate of the Emerald Isle. Daffodils from the same source comprised several seedlings, the best

of which was a large bicolor trumpet variety named *Pride of Munster*. Although not quite up to exhibition form, this should prove a good market flower.

SOCIETIES.

THE FERTILISATION OF FRUIT TREES.

A LECTURE of considerable importance to fruit-growers was recently given by Mr. G. O. Sherrard, from the John Innes Horticultural Institute, Merton, to the members of the Croydon and District Horticultural Mutual Improvement Society, at their rooms, Sunflower Temperance Hotel, George Street, Croydon. In practical experience of fruit-growing one finds failures in cropping some kinds, and it is often remarked that failure to set the fruit is owing to climatic conditions, oftentimes frost, prevailing when the blossoms are developed. Perhaps in some seasons this explanation is correct, but it is now obvious to the scientist that there is another reason for the non-bearing of trees—the sterility of the variety. Most noticeable is this in some varieties of Plums, Cherries and Apples, and at the John Innes Horticultural Institute research is being made to detect varieties which are self-fertile and those which are self-sterile. In districts where perhaps a few varieties are grown, one often discovers a dearth in the crop, and it is in cases of this kind that the beneficial results accrue to the scientist's researches. In the Plum family it is found that an equal number of varieties are self-fertile and self-sterile, and from experiments which Mr. Sherrard and Professor Bateson, who is the head of the John Innes Horticultural Institute, are carrying on, they are able to record the fertility and sterility of each variety, and also how the sterile trees may be made productive by cross-fertilisation. Some useful data shown by Mr. Sherrard by lantern slides proved extremely interesting, and gave the audience some idea of the elaborate precautions one has to adopt to make true records of the different crossings. Perfect isolation of the tree must be adopted, and an insect-proof house was shown where many experiments were carried on. Fruit trees are grown in pots, with the top of the pot covered with material tied round the base of the tree to prevent insects which may be hatched in the soil climbing up the stems. Another illustration was a Victoria Plum tree in the open, encircled with muslin to exclude all insects, and this experiment showed that without the aid of insects the blossom did not set. A variety of Plum known as Wyedale, pollinated with its own pollen, was unproductive, but the introduction of pollen of another variety was conducive to a good crop. Mr. Sherrard informed the audience that many experiments similar to these have yet to be carried on, to show which varieties are favourable to each other in production. With Cherries the difficulty appears to be more pronounced, the number of self-fertile varieties being so few. In the Apple it is found that the introduction of pollen from another variety produces bigger fruit in a self-fertile variety, and the variety *Lord Derby* was shown as an example. Gooseberries are all self-fertile, but the pollen is sticky, and where these are grown near a bed of brighter-hued flowers it has been noticed that insects avoid the flower of the Gooseberry. It will be the privilege of this society to visit the home of these researches on June 10, and the awakened interest will be intensified when that evening outing is made.

EAST ANGLIAN HORTICULTURAL CLUB.

At the April meeting of this club, presided over by Mr. John Clayton, there was a strong muster of members to hear Mr. George Herbert discourse upon "Sweet Peas." Mr. Herbert, as all the Sweet Pea world knows, was for several years with Mr. Bredmore, but is now in the service of Hobbies, Limited, Dereham, Norfolk, who no doubt will be doing big things in Sweet Peas in the future. Mr. Herbert detailed his initiation into enthusiasm for Sweet Peas and the way he had worked to bring about the notable varieties that bear his hall-mark. He dealt largely with culture, diseases, preparing for exhibition and kindred subjects in a style that everyone was able to grasp. Following the remarks of Mr. Herbert came a very interesting discussion. Mr. Robert Holmes, Tuckwood, Norwich, himself a great authority and raiser of Sweet Peas, complimented Mr. Herbert upon the way he had dealt with the subject. Mr. T. Notley and Mr. F. Welby, two notable local growers, gave their views of the matter, as did many others. On the exhibition tables Sweet Pea blooms were placed from Hobbies in a fine assortment. The first Strawberries of the season were also staged—fine dishes of Royal Sovereign from several growers.

BIRMINGHAM AND MIDLAND COUNTIES GARDENERS' ASSOCIATION.

"Of late years hardy border flowers are rapidly coming to the forefront." This was the opening remark of Mr. B. Pugh of Messrs. J. Carter and Co., Raynes Park, London, S.W., when giving a lecture on "Hardy Flowers from Seed for Town Gardens" on April 6 at a meeting of the above association. The lecture, he said, was more in the capacity of a talk, in which he wished to give his audience many useful hints which might not be known to them before. Through the medium of numerous hand-painted slides he transported to the screen before them many exquisite photographs portraying several hardy border glories of past summers, a number of which had been grown in Messrs. Carter's world-famous trial

grounds. Hardy border flowers from seed are best grown in boxes and transplanted when the seedlings become established, care being taken to guard against frost. The boxes should contain the poorest soil possible. To this a little decayed Coconut fibre might be added in order to provide a germinating food for the plants. For protection in the border itself many devices could be adopted, such as placing a zinc ring an inch in height around delicate seedlings to exclude the slugs from them. One purpose of Mr. Pugh's selection of border flowers was to revive old features; therefore he included not only the most up-to-date annuals and perennials, but several older favourites generally discarded of recent years—*Antirrhinums*, *Everlasting Flowers*, *Ageratums*, *Carnations*, *Dahlias*, *Canterbury Bells*, *Nemesias*, *Poppies*, *Nasturtiums*, *Phlox Drummondii*, *Scabious* and *Verbenas*; in fact, all herbaceous border plants would, he contended, flourish in either town or country areas, provided a liberal supply of lime and plenty of manure were given to them. Muriate of potash applied to *Clarkia* and *Balsams*—absolute essentials for all borders—would be exceptionally beneficial, and an experiment in raising *Dahlias* from seed would amply reward the grower with good samples. At the conclusion questions were invited. Several were forthcoming from Messrs. Herbert, Palmer, Webb, Smith, Parker and Ford. The vote of thanks proposed by Mr. Jones and seconded by Mr. Palmer was carried with much appreciation.

ROYAL HORTICULTURAL SOCIETY.

DAFFODIL SHOW.

THE above society held its Daffodil Show at Vincent Square, Westminster, on April 15 and 16. The fine bank of *Narcissi* arranged by Messrs. Carter, Raynes Park, attracted considerable attention, as much by reason of its naturalness as by the effective floral display. Backed and occasionally interspersed by flowering and evergreen shrubs, there was suggested the massed effect possible in the garden at this time, and certainly no other spring flower is capable of such good work. In this way one was impressed by the free masses of such fine things as *Glory of Leiden*, *Mme. de Graaff*, the red-eyed *Firebrand*, the semi-double *Argent*, *Seagull*, *Queen Alexandra* and the Poeticus-flowered *Hercules*. *Golden Rose* (a rich yellow double-flowered incomparabilis) was also good. The low wall fronting the arrangement, and freely planted with alpine, contributed to the garden effect produced.

Messrs. Sutton and Sons, Reading, contributed a nice assortment of seedling Daffodils, representative of self and bicolor Ajax forms, Poeticus, Leedsii and other sections. That numbered 194, a fine bicolor from *Weardale*, was of splendid proportions. Another very rich yellow was 215, a magnificent bit of colour and shapely withal. The flowers were most daintily and effectively arranged.

From Messrs. R. H. Bath, Limited, Wisbech, came a very fine gathering of Daffodils, particularly noticeable being a handsome white flower with green base to the segments, a striking flower not yet named; *Lady Superior* (a glorious Barrii), *White Pennant* (virtually a *Giant Leedsii*), *Cresus* (a flower of unequalled excellence), and *Lady Mayoress* (also a *Leedsii* of giant form).

The Rev. G. H. Engleheart, Dinton, Salisbury, in the annexe, showed, as usual, one of his unique sets of seedlings. They were here in plenty, rich in variety and beauty, of merit and distinction. That numbered 648, a rich golden yellow, is valuable for its lateness. The triandrus hybrids in the group were also a charming set, appealing both by their size and refinement.

Messrs. Barr and Sons, Covent Garden, W.C., arranged a formidable collection of choice Daffodils, seedlings and the leading commercial sorts being staged in abundance. Seedling 802, a golden yellow Ajax, is a magnificent thing, rich in colour and great in size. *Ruby*, a red cup, is a shapely flower and a gem among the Barriis. *St. Olaf* (*Leedsii*) is a dainty flower. *King Alfred*, *Lord Roberts*, *Blazing Star* and *Cassandra* were all notable and good. Messrs. Barr also contributed alpine.

Messrs. Waterer, Son, and Crisp, Twyford and Bagshot, displayed Daffodils and flowering shrubs, *Rhododendron Alice*, a deep pink-flowered *Pink Pearl*, being conspicuous. The rock garden arrangement from the same firm contained masses of *Primulas*, *Aubrietias*, *Mossy Saxifrages* and the like.

Messrs. H. B. May and Sons, Edmonton, arranged groups of *Clematis*, dwarf *Rambler Roses*, *Calceolarias*, and *Tufted Pansies* in pans.

Mr. Clarence Elliott, Stevenage, contributed a rock group with such as *Gentiana verna*, *Oxalis enneaphylla*, *Androsace villosa*, *Arabis aubrietoides*, *Anemone robinsoniana* and others.

Messrs. William Cutbush and Sons, Highgate, N., arranged *Azaleas* of the mollis and sinensis section, also *Indian Azaleas* in variety.

Messrs. Wills and Segar, South Kensington, displayed a fine strain of *Cinerarias*, *Erica wilmoreana* *King Edward VII.*, with *Stocks* and *Mignonette* of a particularly good strain.

Messrs. Whitelegg and Page, Chislehurst, had a very pretty rockwork arrangement, massing such things as *Primula rosea*, *P. frondosa* and *P. denticulata* in variety. *Meconopsis integrifolia* was very fine, also *Daphne Cneorum*, which was full of its rosy flower clusters.

The double *St. Brigid Anemones* from Messrs. Reamsbottom and Co., Geashill, King's County, Ireland, were, as usual, particularly fine, blue, pink, rose, scarlet, violet, flesh and other shades making a brilliant display.

Mr. Alfred Dawkins, 40, King's Road, Chelsea, had a nice collection of *Narcissi*, *White Queen*, *Albatross*, *Lord Roberts*, *Southern Star*, *Dubloon*, *Magpie*, *Lady Margaret Boscawen* and *Cardinal* all being good.

The *Lissadell Plant and Bulb Farm*, Sligo, had many good Daffodils, *Weardale Perfection*, *King Alfred*, *Flambeau* and *Alannah* being all important and distinct. *Judge Bird* (bicolor) and *Fin MacCumhal* (of big Sir Watkin form) were also excellent.

Robert Sydenham, Limited, Birmingham, had a capital collection of leading commercial sorts, *Mme. de Graaff*, *Vivid*, *White Lady* and *Waveren's Giant* being well represented. Mr. C. Engelmann had a good representative lot of *Carnations*. Messrs. B. R. Cant, Colchester, followed with a good lot of *Roses*, of which *Silver Queen* (single, white), *Lady Hillingdon* and *Richmond* were the best.

In the group from Messrs. Cartwright and Goodwin we noted *Nightingale* (a fine Poeticus), *Morven* (bicolor) and *Scarlet Gem*, all of which received awards of merit.

Mr. Christopher Bourne, Bletchley, staged good vases of *Evangeline*, *Lady Moore* (a fine red cup), *Queen of the West*, *Great Warley*, *Queen of Hearts* (a brilliant-eyed flower), *Mrs. Robert Sydenham* and *Buttercup* in an excellent lot.

Messrs. J. R. Pearson and Sons, Chilwell, had *Lord Kitchener*, *Grey Mare*, *Great Warley*, *Lowdham Beauty* (a superb *Leedsii*), *Horace* (a great Poeticus) and *Orange Gem* in a good lot.

The group from Messrs. Walter T. Ware, Limited, Bath, was among the most telling in the show. *King Led* (an enormous bicolor, with green-backed segments), *Queen of the West* (rich golden) and *Horace* (Poeticus), the latter the finest we have seen of this class, were in magnificent form. *Macebearer*, *Embassy*, *White Slave*, *White City*, *Roll Call* and *Albatross* were all fine. There were many splendid seedlings also in the group.

Mr. W. A. Watts, St. Asaph, had a great massed bank of Daffodils, staging the more popular sorts in considerable numbers. The group was one of the most extensive in the show, but, owing to the method of naming, or rather lack of it, we are precluded from referring in detail to the varieties shown.

COMPETITIVE CLASSES.

In the competitive class for a collection of forty-eight varieties, three stems of each, Mr. A. M. Wilson, Bridgewater, took the lead. His best flowers were *Bersek*, (rich yellow Ajax self), *The Fawn* (*Leedsii*), *Lord Kitchener*, *Leontes*, *Cresus* (a fine red cup), *Lancelot* (*Giant Leedsii*), *Buttercup* (rich yellow), *Cleopatra*, *Countess of Stamford* (pure white Ajax), *Brambling* (a brilliant-cupped form) and *Sunflower* (a flat-cupped variety of distinction and merit). Mr. C. Bourne, Bletchley, was second in this class, having *Cornelia*, *Lord Kitchener*, *Lord Roberts*, *Neptune*, *Bernardino*, *Judge Bird*, *J. T. Bennett-Poë*, *Duke of Leinster* and *Countess Grey* among his best flowers. Mr. F. H. Chapman, Rye, was third, with a nice lot of flowers inclusive of some good seedlings.

In Class 2, for twelve long trumpet Daffodils, Mr. C. Bourne, Bletchley, was placed first, *Golden King*, *White Emperor*, *Lord Roberts*, *Cleopatra*, *Mrs. G. H. Barr*, *Mrs. Robert Sydenham* and *Conqueror* (a fine pale bicolor) being the best. Messrs. Cartwright and Goodwin, Kidderminster, were second, *Mrs. E. M. Crosfield* (white Ajax), *Ben Alder* (a glorious big yellow) and *Fort George* (a bicolor with heavy flanged crown) being very fine.

In Class 3, for twelve incomparabilis, Messrs. Cartwright and Goodwin took the lead, having *Whitewell*, *Wonderland*, *Neptune*, *Great Warley*, *Pedestal* and *Marshallight* among good flowers. Mr. C. Bourne, Bletchley, was second, *Macebearer*, *Great Warley*, *Bernardino* and *Duke of Leinster* being all excellent.

For twelve Barrii Daffodils, Mr. Bourne was in the premier place, *Cœur de Lion*, *Southern Star*, *Cossack* and *Queen of Hearts* being very fine. In this class Mr. F. H. Chapman, Rye, was second, having *Little Tich* and several good seedlings in a capital lot of flowers.

For nine *Leedsii* Daffodils, Messrs. Cartwright and Goodwin led the way, *Nemesis*, *Felstar*, *Thistle* and *Lemon Star* being the best. Mr. W. A. Watts, St. Asaph, was second, his Seedling 229 being a distinct flower.

For nine Daffodils selected from Divisions V., VI. and VII., Messrs. Cartwright and Goodwin were first, *Araby* and *Buttercup*, both rich yellow, being very fine.

In the class for six Poeticus Daffodils, Mr. F. H. Chapman, Rye, had a particularly nice lot, *Ibis*, *Ditty*, with Seedlings 124, 120, 24 and 18, being very fine, the last-named of exceptionally good form.

For six double Daffodils from Division X., Messrs. Cartwright and Goodwin, Kidderminster, were placed first, *Sundown* (scarlet and white), *Tintoretto*, *Plenipo*, *Amphion*, *Royal Sovereign* and *Dubloon* being his set.

For a collection of twenty-four varieties (amateurs) representing the three main sections of the flower, Mr. N. Y. Lower, Presteign, Radnorshire, was adjudged first, having *Noble*, *Horace*, *Lucifer*, *Giraffe*, *Olympia*, *Red Beacon*, *Lord Roberts*, *Weardale Perfection* and *Cleopatra* among good things. The Rev. T. Buncombe, Black Torrington, was second.

For six long trumpet Daffodils the last-named gentleman stood in the first place, *Treasure Trove*, *King Alfred* and *Weardale Perfection* being the best vases. The same exhibitor took first prize for six incomparabilis, his vases of *Homespun* and *Gloria Mundi* being very good.

For twelve distinct Daffodils not in commerce, Mr. P. D. Williams, Lanarth, arranged some brilliant flowers. Unfortunately, the varieties were not named, save *White Wax*, a fine white Ajax.

For twelve seedling Daffodils not in commerce, raised by the exhibitor, Mr. A. M. Wilson, Shovell, Bridgewater, was first with a wonderful lot of flowers, his 424, of *Engleheartii* form and crown, being of a uniform apricot shade throughout. It is a delicate and beautiful flower. *Ainzel*, a chaste flower of white with plectee edge of pale orange, was also choice and good.

THE GARDEN.

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MAY 2, 1914.

NOTES OF THE WEEK.

Tulips after Flowering.—When the choicer varieties go out of bloom, they should have the flower-spikes partly cut back, as if allowed to form seed this would undoubtedly weaken the bulb. The bulbs should not, however, be lifted until the foliage is ripened, after which they may be taken up, cleaned, and spread out on a mat in a sunny position to ripen.

Dwarf Brooms for the Rock Garden.—Many rock gardens will be looking attractive just now, and certainly more interesting, where some of the dwarf Brooms are accommodated. *Androsace Ardonii*, *C. Beanii* and *C. kewensis*, which are now giving their wealth of yellow blossom, are some of the best, and are making a grand display either growing on a ledge or hanging over some of the larger rocks. If it is desired of keeping them in a compact state, the growths should be pruned directly after flowering.

Staking Herbaceous Plants.—Many early flowering plants will now require staking, and it is important that this work should be done early, for if the plants are allowed to assume a straggling habit, it is a difficult matter to make them look quite natural. Before the stakes are placed in position it is necessary to tie in the shoots of such plants as *Asters*; and, in fact, most herbaceous plants will benefit by a careful thinning of the shoots before the plants are tied up. The flower-stems of *Eremurus* should receive support as early as possible. *Pyrethrums* will also require early attention, or the stems may become broken down by heavy rain.

Hybrid Barberton Daisies.—The beautiful hybrid *Gerberas* were raised a few years ago by crossing the well-known *Gerbera Jamesonii* first with *G. viridifolia*, the offspring of this with *G. St. Michael*, the latter being a yellow form of *G. Jamesonii*. Since then, by selecting and intercrossing, a wonderful variety of brilliant and pleasing shades of colour have been obtained, from white to pink, many shades of yellow, orange, sunset, to deep rich purple. A group of these charming plants grown in pots will be found of great value for decorating the conservatory at present time. They are of easy cultivation, and deserve to be grown more than they are, as they continue to flower well on into the summer. In some parts of France they are grown on an extensive scale in the open for market purposes. The credit for this beautiful class of plants is due to Mr. R. I. Lynch, M.A., of the Botanic Garden,

Cambridge, who did much to bring them to such perfection. They are grown wonderfully well there and are at present much admired.

Cottages for Workmen at Wisley.—We understand that the Council of the Royal Horticultural Society intend erecting some cottages for their workmen at Wisley. We hope that, while fully bearing in mind the practical side of these, the Council will also see to it that in appearance the cottages will be in keeping with the beautiful

shade of red, and when kissed by the morning sun is far prettier than the garish colours of such a Tulip as *Keizerskroon*, which seems to be the only one grown in most suburban gardens. There are many other Roses the foliage of which is most charming just now, notably *Marquise de Sinety*, *Shower of Gold* and *American Pillar*. This phase of our national flower ought not to be lost sight of.

The Pasque-Flower (*Anemone Pulsatilla*).—This is beyond doubt one of the most charming of all our native flowers. It is not a common British plant; indeed, it is considered rare. When found growing wild it is usually in a rather dry position over a chalky soil, such as on the chalk downs of Berkshire, where it has occasionally been found. The leaves and flowers are beautiful at all stages of their growth. The flowers are pale violet, downy on the outside, and surrounded by pretty collarettes of feathery green. There are many garden varieties, of which alba the one illustrated, is one of the most beautiful of spring flowers.

The Midland Daffodil Society's Show.

The annual show was held at the Botanic Gardens, Edgbaston, Birmingham, on Thursday and Friday of last week. The show, which is reported on another page, once again proved a great success, and there was a representative gathering of Daffodil experts from all parts of the British Isles. One figure, however, was sadly missed, namely, the late Robert Sydenham, who had always entered so heartily into the success of this great exhibition. Out of respect for his memory the annual dinner was not held on this occasion. At a meeting held in the evening of the first day of the show, it was agreed that the dinner should be held in future.

Planting Flower-Beds.—Now that we are close on the season for bedding out, it is a good time to direct attention to a very common mistake. This is the raising of the surface of the beds so far above the level of the surrounding ground that it is impossible to keep the soil properly



THE WHITE VARIETY OF THE PASQUE FLOWER :
ANEMONE PULSATILLA ALBA.

sylvan surroundings. We commend to their notice the excellent designs published in *Country Life* last week, the result of a National Competition arranged by the Proprietors. These are of the greatest interest at a time when the housing problem is such a serious one.

Beautiful Rose Foliage.—During the last few days we have derived a great deal of pleasure from a small hedge of that grand Rose *Grüß an Teplitz*. The foliage of this is a beautiful warm

watered. Not only is it seen in villa gardens and such places where the experience of the gardener may not be great, but in more pretentious gardens, and even in some of the public parks this error is often made. If the soil is raised up like that of a grave, it often proves to be a grave for some of the more delicate plants. Ample supplies of water may be poured on the bed, but most of it runs off, and the poor plants are practically starved in the midst of plenty.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Japanese Plums in Canada.—The statement made by your correspondent Mr. Bunyard in his letter, published in *THE GARDEN* of March 14 last, that the Japanese Plums, such as Abundance, Burbank, &c., are too tender for the climate of England, greatly surprises us in Canada, who have been growing them, without any evidence of tenderness, for many years quite unprotected, where the temperature sometimes goes to 30° below zero. I have always found them to be quite as little injuriously affected by cold as the European Plums.—CANADIAN, *London, Canada.*

The Hardest Grevilleas.—In the extreme west of the country, a great many Grevilleas, as well as other Australian plants, are regarded as hardy shrubs. Throughout the greater part of England, however, most of them may be looked upon only as greenhouse plants, though a couple at least are fairly hardy in the neighbourhood of London. These are *Grevillea rosmarinifolia*, in which the foliage is by no means unlike that of the Rosemary, while its clusters of curiously shaped flowers are borne in great profusion. The second species, *G. sulphurea*, has dark green,

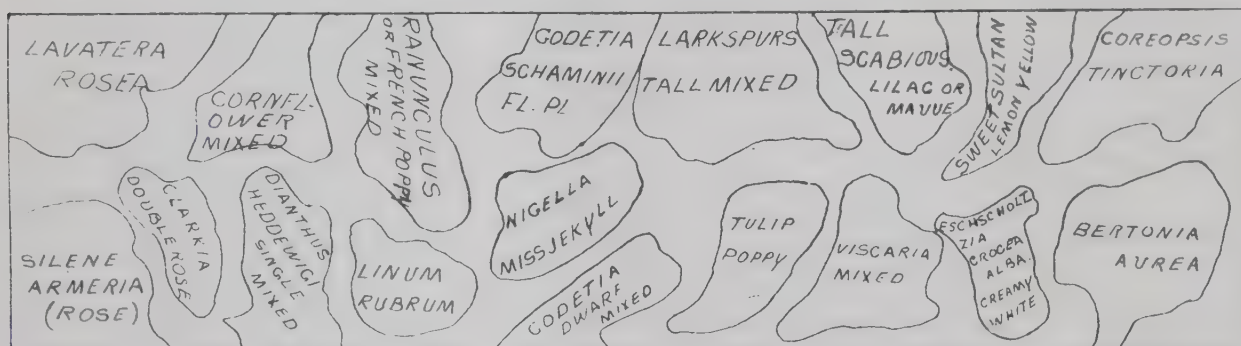
a recognition of similar work done for the flower, and is held by the recipient for one year. In 1912 it was awarded to the Rev. G. H. Engleheart; in 1913 to Mr. P. R. Barr. This year (1914) the recipient is Mr. E. M. Crosfield. He is one of our greatest seedling raisers and a great cultivator. As a showman he has no superior. Few, if any, are the great prizes at Birmingham or in London which he has not won at one time or another. Countess of Stamford, Empire, Ring Dove, Anchorite, Mowgli and Honey Maid are sufficient examples wherewith to illustrate the catholicity of his efforts in hybridising. The choice of the Royal Horticultural Society of this year's holder of the blue ribbon of the Daffodil world is very popular. If he does not talk, Mr. Crosfield works—works hard, shrinks from nothing, even changes his home—for the sake of the flower which he has made his own. I know I express the feelings of all his friends when I wish Mrs. Crosfield and himself length of days, enjoyment and continuous successful endeavours in their new home on the Wye, whither they and their Daffodils flit this summer in their quest of suitable environments.—JOSEPH JACOB.

A White Sport of Saxifraga Boydii.—The statement by M. E. Heinrich, Bavaria, on page 155, that he has a white sport of the beautiful *Saxifraga Boydii* is most interesting, and more interesting still if in course of time it proves to be identical

white-flowered *burseriana* would appear to have entered into both, and a sport or reversion to one of the originals is by no means unusual. What is unusual, which makes the case cited by M. Heinrich doubly interesting, is that he appears to possess not merely a colour sport, but a growth sport or reversion also, which, if presently substantiated, should lend colour to Mr. Boyd's original statement that his unique plant resulted from two white-flowered sorts. What I am curious to know is what this white sport "reported to *THE GARDEN* more than fifteen years ago" has been doing with itself all that time? It would appear not to have been the sporting of a solitary rosette, which might have become crowded out; hence my curiosity. Anyway, I sincerely hope M. Heinrich will get more of these white-flowered variations, and I trust he will let the readers of *THE GARDEN* know about them. In conclusion, I cannot but congratulate your correspondent upon possessing a tuft of *S. Boydii* large enough to make 250 plants. How many such, I wonder, have ever existed?—E. H. JENKINS.

Daffodils with Good Lasting Qualities.—In last week's issue, page 202, a correspondent asks for a list of some of the best lasters in pots. Of these I think *Queen of Spain* easily comes first. Of course, it is not large or showy, but makes a delightful little pot plant, and the blooms last a wonderful time. W. P. Milner, another small flower, is also a tough little fellow which outlasts many of his larger brethren. *Obvallaris* is another. *Maximus* is very good, though not very free-flowering. *King Alfred* is another fine laster, though dear at present for pot work. *Blackwell* is a very good pot plant, and stands longer than many. *Emperor* lasts as well as most, but to my mind is rather big for house work. I daresay your correspondent has noticed that the early varieties last longer as a general rule than the later ones. This is on account of the cooler atmosphere of the room (at any rate at night) and a less powerful sun. No doubt pulling down the blind during the sunniest part of the day would prolong the life of the flowers, but if overdone the plants would become too tall. When grown outside, *Lucifer* is a wonderful Daffodil to stand as a cut flower, although it looks frail. Nearly all white trumpet Daffodils are quickly over, and the *Leedsii* are not as a rule very good.—J. DUNCAN PEARSON, *Lowdham, Notts.*

— I cannot say that I have ever made any exact trial of the different lasting properties of Daffodils in pots, but it rather surprises me to hear "M. E. E.'s" experience with *Mme. Plomp* and *Victoria*. Speaking without a book, I should have said the latter would be the longer laster, and it has occurred to me that the box in which they were grown might possibly account for it. *Lucifer*, although it does not look as if it would be, is a marvellous laster. I doubt if there is any to beat it. *King Alfred* and *Blackwell* are two more which have the same good property. Of the cheaper kinds I would suggest *Homer*, *Seagull*, *Fairy Queen* and *Argent*. "M. E. E." is right about *Prince of Austria* as being a superb Tulip and a splendid laster. *Jenny*, *Cerise Gris-de-lin*, *Vermilion Brilliant*, *Arms of Leiden* and the very new *De Wet* are some that are worth a trial, and which I think will be found to give satisfaction. If a double is wanted, nothing is much better than the old *Murillo*.—J. J.



A SUGGESTED ARRANGEMENT FOR A SMALL BORDER OF HARDY ANNUALS, THE WHOLE TO BE CARPETED WITH DWARF WHITE ALYSSUM.

needle-shaped leaves and yellow flowers. Both are decidedly interesting and ornamental evergreen shrubs.—H. P.

A Border of Hardy Annuals.—These plants are now so popular and their merits so generally recognised that further introduction seems unnecessary. The accompanying small sketch has been prepared to indicate how the seed may be sown broadcast, so as to avoid the straight line and formal block system. No pure white clumps have been introduced because of the ground-work being white. Where such a plan commends itself, there may be a desire to duplicate some favourite varieties, which, of course, can easily be done by eliminating some of those mentioned. In the case of sowing a very long border, the whole or part of this design could be repeated, if so wished, and in the event of so doing I would suggest cream, pale blue, or lilac to follow on the yellow shades. Arrange, if possible, for the border to be get-at-able from back and front, while very wide borders should also have stepping places or a narrow walk so as to facilitate the work of sowing, thinning and staking.—C. TURNER, *Ken View Garden, Highgate.*

The Barr Cup for Daffodils.—The Barr Cup, which commemorates the great work of the late Peter Barr on behalf of the Daffodil, is awarded annually by the Royal Horticultural Society as

in habit with the more vigorous-growing *S. Boydii* alba. The interest in the case centres chiefly in the fact that the raiser of *S. Boydii* first distinctly stated that this queen of yellow Saxifrages resulted from two white-flowered sorts—I believe, speaking from memory, *burseriana* and *rocheliana*—and it was not till the plant flowered at Kew some years later that the now generally accepted parentage of *burseriana* x *aretioides* was suggested. Subsequently, when the late Mr. Dewar, then hardy plant foreman at Kew, wrote the text to accompany the coloured plate of *S. Boydii* in *THE GARDEN*, he made the statement—which, I believe, I have committed to memory aright—that *S. Boydii* alba "was obviously of the same parentage." Now, no two forms are more distinct than *S. Boydii* and *S. B. alba*, and why Mr. Dewar should have written "obviously" when the thing was not, and is not, obvious I do not know. The last named is not only distinct in colour and in the substance of its flowers from *S. Boydii*; it is distinct in stature, and remarkably so in its vigorous habit of growth and genial nature. In *S. Boydii* alba there is nothing to suggest either *burseriana* or *aretioides* influence, though much to suggest such a combination as *burseriana* and *rocheliana*—so much so, indeed, that I have repeatedly wondered whether the raiser had confused them in his mind. In any case, the

Chionodoxas Improving when Established.—Pressure of other matters has prevented me from stating that during the many years in which I have cultivated the Glories of the Snow, my experience has been that they have improved considerably after being planted. In many cases newly imported bulbs have done but poorly the first year or two, and have greatly improved afterwards. They love deep planting, as a rule, and in some cases it appears to take a few years before they reach their proper depth, which they can do by means of "droppers," as do some other bulbs.

Bulbs for Spring Planting.—Mr. Jenkins (age 191, April 18) has drawn attention to what I said in including among bulbs for spring planting the Belladonna Lilies and Alstroemerias. The article was not intended as one for universal treatment of the bulbs mentioned, but was written for those who wished to add to the bulbs they already had some others not in their possession, and which might be planted in spring. I carefully do many bulb dealers keep their bulbs now that they can be planted earlier than formerly, when they had frequently made a great deal of growth before spring arrived. The Belladonna Lilies can often be obtained in quite good condition for planting in the middle of March, and so can the Alstroemerias. The dealers who issue catalogues of bulbs for spring planting include these, and can, and do, supply them in good condition for planting. Personally, I prefer earlier planting, but very frequently with late-ripening bulbs the weather is too severe for planting if they arrive in good time, and I have often found it well into March before they could be entrusted to Mother Earth. As sound general practice, I always recommend planting most bulbs as soon as they can be obtained, but they are often wonderfully accommodated. I frequently plant Alstroemerias very late through choice.—S. ARNOTT.

Fungus Disease on Chionodoxa.—Last year I noticed that one plant of small colony of *Chionodoxa sardensis* was undersized and looking generally unhealthy. A closer inspection showed the anthers to be filled with a quantity of purplish dust-like spores, similar to those frequently seen in the anthers of *Gene cucubalus* and allied plants. I submitted the diseased spray to Mr. Arleton Rea, hon. secretary of the British Mycological Society, who identified it as *Ustilago Vaillantii* (Tul). Apparently this is the first record of the fungus appearing in Britain. I think it is very likely to have been overlooked in other gardens, and it would be very interesting to hear of its occurrence elsewhere and if it confines its attacks to the genus *Chionodoxa*. This year I find two more plants in my little patch are affected, in spite of immediate removal of the diseased flowers last year. The mycelium is probably perennial in the bulb, and I should be glad to know if there is any way of preventing its spreading other than by burning the infected plants. I have a good patch of *C. Luciliae* growing a few yards away, as well as *Scilla bifolia* and *S. sibirica*, but so far these are untouched by the fungus.—NORMAN G. HADDEN, *St. Audreys*.

Malvern. [The fungus *Ustilago Vaillantii* is not new to England, though it is not often noticed. It was first recorded in "Grevillea" in 1893, when it occurred in England and in Ireland, but had been noticed in England six or seven years before that. It attacks *Scilla bifolia*, *S. maritima* and possibly some other species of *Scilla*, some of the *Muscari* and the *Chionodoxas*, being perhaps most frequently seen in *C. sardensis*. We have had it in our own garden, and have seen it several times from others. You are quite right in thinking the mycelium to be perennial in the bulbs. The bulb base is filled with it, but we do not think it is liable to spread to other plants. Like most of the smuts with loose spores, in all probability the young developing seeds are attacked before they leave the fruit, and then all through



NEW HYBRID TEA ROSE PRINCE CHARMING, SHOWN BY MESSRS. HUGH DICKSON AT THE SPRING ROSE SHOW IN LONDON LAST WEEK.

their life the fungus will manifest itself in their flowers. It is, therefore, safer to remove the affected plants as soon as they are seen, so as to reduce the danger of young seedling plants being attacked.—ED.]

FORTHCOMING EVENTS.

May 5.—Royal Horticultural Society's Exhibition and National Tulip Society's Show. Lecture at 3 p.m. on "The Value to Gardens of Some of Mr. Wilson's Introductions from China." Scottish Horticultural Association's Meeting.
May 7.—Linnean Society's Meeting.
May 11.—United Horticultural Benefit and Provident Society's Committee Meeting

SAXIFRAGA BURSERIANA AND ITS VARIETIES.

CAN those of your correspondents who doubt the distinctness of the forms of Burser's Saxifrage be possessed of the best commercial varieties of this unique species? This is a question which naturally forces itself to the front, since, if the varieties of this plant are not as distinct as "chalk from cheese," they are certainly as distinct as many so-called species, and equally so for garden purposes. Some of your correspondents refer to the "type," not knowing, perhaps, that the type of to-day is a glorified form of that which did duty for it in former years. The plant that I knew as *S. burseriana* for nearly thirty years was of a very tufted, cushion-like habit, the small, creamy white flowers set on inch-high peduncles. To-day the type as exhibited is a vastly superior plant, with whiter and larger flowers, longer peduncles, and more glaucous. Beside it the old plant is not worth growing.

The first great break away was sent to the late Mr. Selfe Leonard as the type from "a new locality." This proved to be the true major variety, which I always class as the aristocrat of the lot. This is characterised by large, sparkling white flowers, the slightly crimped petals having crenated margins. It is almost, if not quite, unique in its meadow-sweet-like fragrance. The habit of the plant, too, is distinct, in that it spreads laterally and does not tuft. The rosettes, too, are large in proportion to the flowers. That recently shown as *crenata* is in the same way in some respects, but is not so good. *Gloria* has considerably larger flowers than major, but they are flimsy in texture by comparison and dead white, minus the glistening sparkling surface, which is one of major's greatest charms. Then, of course, *Gloria* has a decidedly and densely cushioned tuft. In size the latter is only equalled or surpassed by *magna*, which has yet to come to the front. It is also of cushion-like growth. *Speciosa* has the smallest rosettes of leaves, and is the latest to flower.

Reference has also been made to *tridentata*, but the name is a misnomer. Whoever saw a Burser's Saxifrage with a thrice-parted leaf or petal? Its correct name is *tridentina*, which it takes from the Tridentine Valley, in which it is found. It is a good and useful form, virtually a tufted major. Unfortunately, much confusion has been brought into being by the thoughtless use of such names as major, *grandiflora* and the like being applied to any slightly larger form. It must not be forgotten, however, that Burser's Saxifrage is an exceedingly variable plant—variable in size of flower, flower quality, stature, tufted or spreading habit, and time of flowering. Does anyone wish for more than these?

Then, more than one reference has been made to disbudding. But how can a plant characterised by one-flowered peduncles be disbudded at all?
E. H. J.

SOME BEAUTIFUL POPPY-WORTS.

THE MECONOPSES.

WHILE it is exceedingly improbable that this somewhat fastidious genus of Poppyworts will ever yield anything more surpassingly beautiful and imposing than the blue-flowered *M.*

Wallichii, there is not the least doubt that the introductions of recent years, while imparting variety and furthering interest in more than one department of hardy plant gardening, have done much to increase the popularity of the group as a whole. In this connection, doubtless, no species has played so important a part as *M. integrifolia*, discovered a few years ago by Mr. E. H. Wilson when plant-hunting for Messrs. Veitch in the high mountain borderland of China and Thibet. It was a great—indeed, unique—find, while its importance to gardens—albeit it is not grown by everyone with success—cannot well be over-

again in the hope that sooner or later we shall discover the secret of their special needs and lift the veil from their apparently insatiable desires. To the precise conditions prevailing in their mountain home not a few alpine, judged by their success in lowland gardens, would appear more or less indifferent, absence of high altitudes, snow and a protracted definite resting period affecting them but little.

So much, I fear, cannot be advanced with respect to all the species of *Meconopsis*, *M. integrifolia*, for example, in some instances apparently influenced by the long-continued mildness and growing conditions of recent autumns, having shown a desire to flower close upon the ground at that season. It has been so here in the humid Thames Valley practically at sea-level, in the breezier district of Sheffield bordering on the moors 700 feet above the sea, and doubtless in other places, and, of course, these precocious ones are never of use again. Happily, so far, it is not a large proportion of any batch which flower thus early, and were it otherwise, tantalising though it would be, it would have to be endured, seeing it is impossible

no attempt should be made to cultivate it under glass, a pernicious system destined to rob the plant of its finer colour attributes and mar the general effect.

As is common with all plants raised from seeds, variations both of leaf colour and form occur among these *Meconopses*, with, in some instances, slight colour deterioration. The worst offender that I have known in this respect is *M. racemosa*, some of the shades of colour being positively vile. What the progeny of such would be would not be easy to predict. To save seeds from the best of them in order to perpetuate the good remaining is the natural recommendation in such a case, though it would be not less interesting or instructive did someone raise a generation or two of these retrogrades in order to ascertain what latent influence there still remained. In the cross-breeding of certain types of florists' flowers it is well known that in the first generation seedlings of a retrograde character are the rule, the superior flowers following from these retrogrades a generation later. One wonders whether some influence akin lies hidden in the inner recesses of some of these Poppyworts. The point is certainly worth deciding.

E. H. JENKINS.

(To be continued.)

DAFFODIL NOTES.

THE ROYAL HORTICULTURAL SOCIETY'S 1914 SHOW.

FOR the third time of asking the Royal Horticultural Society has had a Daffodil show in the large hall in Vincent Square. There is no impediment that I can see in the way of this being the start of a long series of annual exhibitions. That which is now under review was full of encouragement. Never have I seen the hall so full of Daffodils. The trade response was grand. The competitive classes attracted more entries than on either of the two previous occasions. Altogether it was a Daffodil show the like of which has never been seen in London before. Yet some of us must have been conscious all the time of there being something wanting. We sadly missed the magnificent trumpet exhibit of Mr. E. H. Krelage and the superb exhibits of Mr. E. M. Crosfield. What a lot salmon-fishing will have to answer for! I do not mind it taking

the Foreign Secretary from the House of Commons, but it is a different matter when it keeps a Crosfield from our great annual show.

And then, poor Miss Currey was an absentee. Owing to ill health her choice and valuable collection had to be dispersed last autumn. Never again will there be a Lismore exhibit with its characteristic display of bright red eyes and refined white trumpets. To see "Tommy" Jones busying about brought back memories of the past, for it was he who in later years always arranged her blooms.

The distinguishing features of the show were first, the number of trade exhibits. Two—these



TULIPA STELLATA, A BEAUTIFUL LITTLE SPECIES WITH YELLOW AND RED FLOWERS. THIS RECEIVED AN AWARD OF MERIT WHEN SHOWN BY MESSRS. BARR AND SONS IN LONDON LAST WEEK.

estimated. Prior to its coming there was nothing like it, and since that time no species has been introduced to equal it.

In my opinion, we have within the limits of these twain, whether regarded from the standpoints of imposing grandeur or flower beauty, the pick of the whole genus. They rank high in the estimation of all gardeners who know their worth. Nor does one's love or appreciation diminish one iota because of the difficulties surrounding their cultivation, or because failure, either partial or complete, characterises our efforts concerning them. Rather are we in admiration drawn nearer to them, trying them again and

to prevent it. At the same time a number of plants so flowering militates against the good effect that might have been in other circumstances. To some extent this inclination to premature flowering may also be due to a check—a standstill condition it may be—during dry weather; and seeing that these plants are moisture-loving by nature, care should be exercised that they do not suffer from lack of it at any time during the developing season of the rosettes.

Doubtless we have much yet to learn of the likes and dislikes of this fine plant, for which at its best no praise is too great. Not the least of its merits is that of complete hardiness; hence

of Messrs. Barr and Sons and Messrs. J. Carter and Co.—received the very exceptional honour of gold medals. The rewards were the same, but the displays were totally different. Barrs had a more or less conventional group, with a centre full of seedlings and choice varieties in small quantities or as single blooms, while on either side were large vases of the cheaper and more plentiful ones. Carters gave us a sample of Daffodils in masses under trees. Some may scoff at such efforts and talk in Robinsonian lingo of the artificiality that must necessarily be theirs; but I see in these stiff masses an educational purpose which it is impossible to achieve in any other way in the limitations of an exhibition hall, namely, the general effect of the different kinds when planted in a mass. Suttons departed from anything I have ever seen them do, inasmuch as their small, artistically arranged group was composed entirely of their own seedlings.

Mr. Watts of St. Asaph filled a large space against the wall immediately on the right of the entrance door. He had many new seedlings of his own raising, together with large masses of some of the best trade varieties. I mention this group because I instinctively couple it with the many flowers, of which a very large proportion must have been seedlings, that he exhibited in the competitive classes. For some years we have seen this gentleman's "home-made" blooms in London, Birmingham and elsewhere; but the time seems to have now arrived when he is able to exhibit them "on a grand scale." It is hardly necessary for me to speak of the increased interest that this will give. In former notes I have spoken of the efforts of Mr. Bourne to get away from the "formal and bank-like arrangement of groups hitherto adopted." His exhibit marked the high water of his endeavours, and his display called forth many remarks of appreciation. Its general plan was as follows: A brown velvet curtain at the back, with green covering for the top of the staging and the tiered half circles, which gave it its most distinguishing features.

Next in order to the trade exhibits, which both because of their number and their quality mark off the London show from all others, I would like to deal with the competition in the second and third sections of the schedule. It was good. Only in one class out of twenty-four was there no entry, while in all but two there was some competition, culminating in no fewer than six collections being staged in Class 55 for thirty-six varieties. I have taken some pains to make a little inventory of all the varieties in the amateur and novice classes that gained first and second prizes, and in the large one just mentioned (Class 55) of the third prize collection also. In these twenty-four classes there were 173 varieties distributed among the above prize-winners. Of these, only sixty-five were staged more than once and thirty-nine more than twice. As statistics similar to what I have got out seem generally popular, I feel I cannot do better than publish the results of my census in detail. Shown ten

times: Weardale Perfection. Nine times: Lady Margaret Boscawen. Seven times: Noble and King Alfred. Six times: Lord Roberts, Homer, Argent and Horace. Five times: Evangeline, Mme. de Graaff, Orangeman and Homespun. Four times: Bernardino, Incognita, Golden Rose, Florence Pearson, Glory of Noordwijk, Seagull, Virgil and Lucifer. Three times: Ptarmigan, Cassandra, The Colonel, Harold Finn, White Queen, Bennett-Poë, Queen of Spain, White Lady, Lowdham Beauty, Diana, Whitewell, Pilgrim, Beacon, Sunrise, Solfatare, Plenipo, Chryseis, Gloria Mundi and van Waveren's Giant.



A MAGNIFICENT GROUP OF MECONOPSIS INTEGRIFOLIA IN THE GARDENS OF MR. W. A. MILNER, TOTLEY HALL, SHEFFIELD.

Twice: Sulphur Phoenix, Elvira, Barrii conspicuus, Mrs. H. J. Veitch, Torch, Monarch, Waterwitch, Candidata, Vivid, Royalty, Albatross, Dorothy Kingsmill, Giraffe, Olympia, Armored, Mrs. R. Sydenham, Bullfinch, Branston, Marguerite Durand, Phyllis, Sidney, Dante, Ideal, Lemon Queen, Castile and Barcarolle.

The last feature that I have room to touch upon (I am leaving details of the more important novelties till my next) is the record number of varieties that were placed before the Narcissus committee for awards. I did not count them, but I have been told there were more than fifty. Anyhow, they were so many that a special sub-committee was appointed to do some weeding out. Eight plants gained awards, viz., Lady Superior, a white-perianthed Barrii; Nightingale, a well-formed early Poet; Scarlet Gem, a brilliant red-eyed Poetaz with yellow perianth; Golden Sceptre, a Jonquilla hybrid, figured in the 1913 "Daffodil Year Book" as Marigold; Morven, a pale bicolor Ajax; Princess Juliana, a deep yellow Ajax with a boldly edged trumpet; Southern Gem, a pale Giant Leedsii; and Admiration, a tall, striking yellow and red Poetaz. Of these awards, that of Admiration was for the garden and that of Southern Gem for the garden and cutting, while the remainder were for show. The prizewinners in the various classes were dealt with in the report that was published last week. In a subsequent issue the novelties at the Birmingham show will receive attention. JOSEPH JACOB

AN ANNUAL FOR SANDY SOIL.

THE PORTULACA.

THERE are many amateurs who have to contend with a very light, sandy soil, which in hot seasons seems to dry up in almost no time, and so causes endless labour with the watering-can. Ground like this can, of course, be greatly improved by a liberal addition of heavy clay or loam and cow-manure: but if the garden is of any size, this works out very expensive, and consequently

in most places only a small portion can be done at a time.

Now, although most kinds of plants delight in a medium loam, there are a few which thrive well in that of a very light nature, and the Portulacas are one of these. They are dwarf-growing little subjects, eminently suited for rockeries or for edgings, and are best sown in the open border where they are intended to bloom; but, being half-hardy annuals, they must not be put in until all danger of frost is over and the weather appears settled. The latter half of May is about the best time, and a position fully exposed to the sun must be allotted them. Sow the seed thinly in rows about six inches apart, so that the surface soil can be easily stirred and weeds kept down. Should the summer prove exceptionally hot and dry, watering might become necessary; but it is very doubtful, as the hotter the sun the more brilliant will be the display of flowers. Any amateurs who have very light soils would do well to give this splendid little plant a trial, as the sandier the soil the better it will flourish, and during the whole season it demands practically no attention at the hands of the cultivator. Seed can be obtained of both double and single varieties, and can be had in the following separate colours—crimson, yellow, and white; but I think the mixed is preferable to the separate shades, as it gives such an endless variety, which all blend so well together.

Troon, Ayrshire.

G. B. W.

GARDEN VARIETIES OF ABUTILON.

THERE are few, if any, greenhouse climbers more continuous flowering than the Abutilons, as they will commence to bloom from the spring and continue till autumn is well advanced, while if a temperature of 50° to 60° be maintained, they will flower even later than that. What is more, they are available for other purposes besides roof and rafter plants, for neat bushy specimens from 18 inches to a yard or even more in height are exceedingly useful for greenhouse decoration. If struck from young growing shoots in the spring, they will form effective little plants in 6-inch pots towards the end of the summer, and are then particularly valuable for the sake of variety.

Another way of treating Abutilons is to grow them as standards, and in this manner they are, from the pendulous nature of their blossoms, seen to considerable advantage. In this way they are particularly valuable for grouping in the greenhouse or conservatory. The cultural requirements of the Abutilons are not at all exacting, as they will thrive in ordinary potting compost. It is, however, as well to bear in mind that they are fairly liberal feeders, and if at all starved at the roots, some of the leaves are sure to turn yellow and drop.

The great variety that we have now in the garden forms of Abutilon would seem to have originated in the pure white *Boule de Neige*, which, though sent out as long ago as 1872, is still one of the very best of that tint. It was sent out by M. Lemoine et Fils of Nancy, and though that firm, with their well-known courtesy, endeavoured, for my information, to trace its origin, they were unable to do so. The advent of a white-flowered form led to the possibility of pink or rose coloured kinds, and in due course the variety *rosæflorum* made its appearance. Although I am not aware of its origin, there is but little doubt it was the result of a cross between *Boule de Neige* and the orange red *A. Darwinii*, a native of Brazil. That the union of these two tints should result in the production of pink flowers is somewhat singular, but a parallel case is to be found in *Rhododendron Princess Royal*, which was obtained by crossing the white-flowered *R. jasminiflorum* and the orange red *R. javanicum*. Another instance is furnished by *Begonia weltoniensis*, a pink flower whose parents were *B. Dregei*, with white blossoms, and *B. Sutherlandii*, in which they are a kind of coppery yellow. Once Abutilons of these distinct colours were obtained, others followed suit, and numerous varieties were quickly put into commerce. Several Continental raisers took them in hand, and in this country the late Mr. George of Putney raised many beautiful kinds,

some of the purplish tints being very striking. The raising of Abutilons from seeds is very interesting, especially if the crossing is carried out in a systematic manner. Plants from seed sown early in the spring will flower the same year, but in the case of any doubt as to the quality of a particular individual, it will be policy to flower it a second season. Of well-recognised varieties it will be hard to beat *Boule de Neige* (white), *Golden Fleece* (yellow), *Sanglant* (deep red), *Anna Crozy* (purplish), *Royal Scarlet* (light scarlet) and *rosæflorum* (rose). Some of the newer varieties, with large, shallow, widely opened flowers, are less pendulous than the older kinds, and by no means as



AURICULA GORDON DOUGLAS. A BEAUTIFUL NEW VARIETY WITH RICH YELLOW AND BRONZE FLOWERS.

graceful. While the above remarks apply to the Abutilon as a flowering subject, there are some remarkable for their handsome leafage, and for this reason alone they are extensively grown. Chief among these are *Savitzii*, whose leaves are clearly variegated with white; *Souvenir du Bonn*, a more vigorous grower with less variegation; and *Thompsonii*, the foliage of which is mottled with gold. The variegated-leaved variety of *A. megapotamicum* or *vexillarium* is also very striking, while of the original species, *A. striatum*, whose rich yellow flowers are veined with crimson, affords a pleasing variety.

H. P.

HARDY PERENNIALS IN SMALL GARDENS.

IT is frequently somewhat glibly stated that herbaceous plants will yield a constant and plentiful supply of flowers from spring to autumn, and certainly this is true, provided one has an extensive garden devoted to a thoroughly representative collection, cultivated with skill and painstaking care; but it has to be admitted that often in a small garden we see herbaceous borders which are but intermittently gay, and sometimes for weeks on end are almost bare of bloom. In many an impulsive denunciation of formal bedding we have been told that *Pæonies*, *Iris*es, *Delphiniums* or *Phlox*es are beyond comparison with *Geraniums*, *Calceolarias* and *Lobelia*; but if the centre bed of a small garden is given over to either of these subjects, the result in the long run is apt to be disappointing. The *Pæonies* are gay for a fortnight or three weeks, and more or less untidy and dull for the rest of the year, and the same drawback applies to the other subjects quoted. Even in a mixed border of small dimensions there is a risk of frequent gaps and scarcity of flowers that in time palls on one, and, maybe, leads to a return to orthodox bedding.

By the exercise of forethought and judgment, however, it is possible to realise one's ambitions for a continuous display of colour and beauty, even in a restricted area, by the use of hardy perennials alone, and with this end in view no plan is so entirely satisfactory as that of carpeting the ground with some low-growing subject, thinly interspersing plants of taller, erect habit to flower at different periods. For instance, a bed may be carpeted with the rosy-flowered *Saponaria ocymoides* or *Dianthus deltoides*, and over the surface of the bed plants of *Delphiniums* may be thinly distributed. Between these some bulbs of *Galtonia candicans* or some hybrid *Gladioli* may be planted, and the result of such a combination of tall plants with a carpet of close-growing subjects will be that the bed is never bare, but always attractive.

Veronica rupestris, *Cerastium Biebersteinii* and *Oenothera missouriensis* are other suitable subjects for carpeting, and we may have *Camassias*, *Montbretias*, *Liliums* or *Liatris pycnostachya* for companions to any of these plants.

A charming little plant for bedding is *Chænostoma hispida*, forming compact little bushes less than a foot high, clothed with a mass of starry white flowers. The plant blooms incessantly, and if some such thing as *Lobelia fulgens* or *Chelone barbatus* is planted at intervals in the bed, the charm of both subjects is enhanced by the companionship.

Dwarf Antirrhinums or Pentstemon Newbury Gem will make a grand display in a bed upon the lawn; but if in early summer Spanish and English Irises occupy the bed, and in the autumn a few choice Phloxes grown on single stems are seen, interest is greatly enhanced, and neither the Antirrhinums nor Pentstemons need suffer. The chief point to observe in planting beds on such lines as these is, first, to plant thinly and then to watch progress, restricting when necessary such plants as tend to encroach too much upon the space that should be occupied by other things. One great advantage of this system of bedding is that replanting only needs to be done about once in three years, and it is also a plan that dispenses with the necessity of glass accommodation for the plants in winter.

HEATHER BELL.

SEASONABLE WORK AMONG ROSES.

THIS is the time when work among our outdoor Roses commences in earnest. Pruning is finished, and the very latest of any except pot planting done. Then there is the spring mulching to complete, and, if this is done early, we get full benefit throughout the growing season. So far as the selection of manures is concerned, we need to pay most attention to the natural character of the soil. Roses enjoy almost any manures, but it is better to put the stiffest upon light and porous soils, with a leaning in the other direction if naturally on the stiff and cloggy side. But there have been quite a number of practical notes upon manures lately, and I only wish to remind readers now of their greater benefit when used at this time of the year.

Very soon our maiden plants will need special attention, and much of their future depends upon how they are handled from now onwards. Where bushy plants are sought, the buds producing only one growth from the eye should be headed as soon as two or three leaves have fairly developed. Most of the Teas and Hybrid Teas push out more than one bud, and are afterwards more free in breaking from the base than the majority of our Hybrid Perpetuals. Due care should be taken not to head a few varieties that produce their best flower from the first shoot in their maiden stages. Let these develop a good flower, and cut this off boldly to within three or four of the bottom eyes when wanted. You will thus secure the finest flower, and generally get a good bottom made for the following year.

Staking.—Unless quite dwarf and robust growers, all should be staked as soon as the Rose eyes push into growth. Do not make the mistake of using unsuitable sticks. The growth of maidens varies so much that sticks or stakes ranging from 2 feet to 8 feet are needed, and it is folly to put the taller ones to the wrong purpose or have the shortest against climbers. A very little thought will avoid this. Do not draw the growth in to the stick with any force. The young shoots need a certain amount of coaxing in the first tie if inclined to grow widely, and they break out very easily.

Keep some good and well-worked soil drawn around the base of dwarfs, as this will assist a better union and keep the whole soft and less

likely to be strained by wind and rains. Suckers will be pushing from young standard Roses, and all shoots below the worked shoulders should be cut out as soon as they can be got at. There is much greater danger of wind breaking the shoots in the case of maiden standards, and all of these need sticks in some form. More persistent heading is advisable here. Several methods of securing are practised, but the one most in favour is a stake of sufficient length and strength to admit of the stem being soundly tied, and with a top long enough to carry the young Rose growth also. As no swaying of the Briar stem is desirable, it pays to take this little extra precaution and make a good job of the whole from the first.

Disbudding.—By the end of May many of our forward plants will need thinning out, *i.e.*, taking away any young shoots that have a tendency to grow inwards or are too numerous for proper or perfect development. This is all the more important with the exhibitor's blooms, who needs

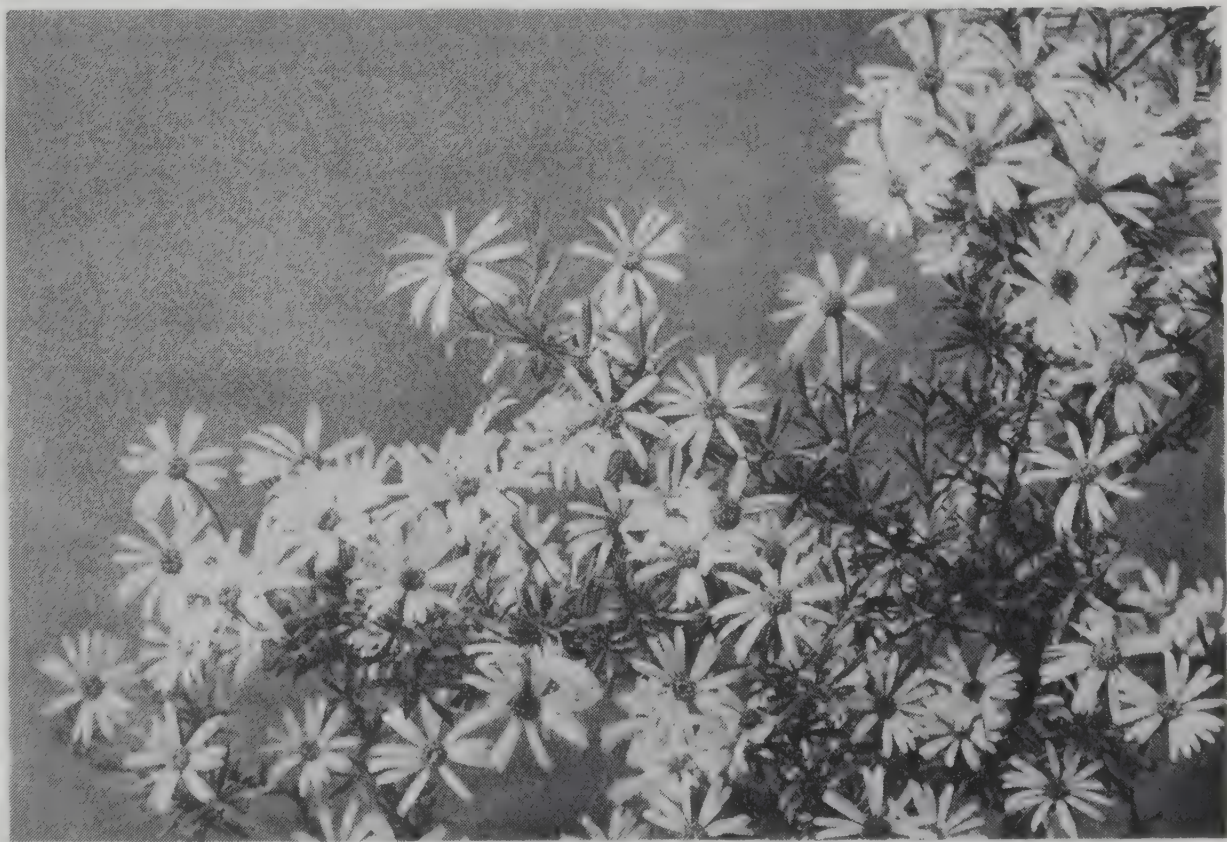
and in not a few instances eggs and germs, with a few insects, often survive the winter in thick growth under the eaves. I would strongly advise the thorough cleansing of such places immediately after pruning, when a more powerful solution might be used than would be safe as growth commences. Cleanliness and careful ventilation are the main points with our indoor Roses, which should now be in full profit.

A. P.

A SHRUBBY CAPE ASTER.

ASTER FRUTICOSUS.

Of this extensive genus the section known as Michaelmas Daisies is so common in our gardens that any description of the plants is unnecessary. There is, however, another section containing a few species with a shrubby habit, most of which are natives of South Africa; therefore they require the protection of a greenhouse during the colder part of the year. *A. fruticosus* is certainly a very



A RARE SHRUBBY PLANT FROM THE CAPE: ASTER FRUTICOSUS. THIS IS CLOSELY RELATED TO THE MICHAELMAS DAISIES.

to curtail quite as much in the number of young breaks as in the number of flower-buds allowed, all the strength going into a less number in order to get the highest quality.

Insect Pests.—Immediately leaves develop upon any shoots, it is well to wash them, even if not attacked by insects or disease. So much depends upon being in time with this work, and the maxim of prevention being better than cure, that no loss is incurred although the pests are not visible. Washing early prevents them from gaining any hold, and cannot be done too soon. At the same time, much less labour and strength of washings are needed than if the enemy is delayed only a week or so after its first appearance. It is upon warm walls and in sheltered corners that we find our first supply of aphides, and these will soon increase and took the neighbourhood if allowed any rest. A more persistent and early use of the syringe is all the more needed in such position because they are less open to cleansing rain.

desirable pot plant, and although it is recorded to have been cultivated as long ago as 1759 in English gardens, it is apparently very rare at the present time.

The plant forms a small shrub from 2 feet to 3 feet high, the woody stems branching out in a zigzag manner. The short, dark green leaves are thickly borne upon the young branches, from which the flowers are freely produced upon slender peduncles during March and April, remaining in a fresh condition for a couple of months. Individually the flowers are about an inch in diameter, with the ray florets of a pleasing purple colour, and bright yellow centre florets. Useful specimens may be grown in 6-inch pots in a compost of loam, leaf-soil and sand, while propagation may be effected by cuttings of the young wood, which root readily in sandy soil, placing them under a bell-glass. Other names by which this plant is sometimes known are *A. fruticosus* and *Diplopappus pedunculatus*.

W. T.

PEACHES AND POT PLANTS GROWING IN THE SAME HOUSE.

MANY amateur gardeners possessing greenhouses like to grow a Peach tree or more, according to the size of the structure, in addition to the usual kinds of pot plants. Some cultivators meet with difficulties and fail to get full satisfaction from the Peaches and the pot plants; others succeed very well. Much has to depend on the situation, but more on the management, generally. At the present time the Peach trees will need the final thinning out of the young shoots and also the removal of some of the young fruits; but the final thinning out of the latter must be put off until the stones have hardened in them. Nature rights itself, as it were, to a great extent. For instance, if a Peach or Nectarine tree—and, in fact, any other kind of fruit tree—is overlaid with young fruits, when the stoning period comes many are cast off, sufficient numbers remaining on to come to maturity. They are, however, always a little below the average size, and the tree, in perfecting the crop, is checked and much weakened. No tree should be put to such a strain, and that is the reason why cultivators commence, while the fruits are small, to gradually remove all except those sufficient to form a good average crop. The trees bearing such crops are not weakened, and are strong enough to continue to perfect such crops year after year. It is only advisable to leave a crop on a little above the average—one fruit to a square foot of wall or wire surface—in the case of young trees possessing extra vigour. The result of the heavy burden is, of course, to check such luxuriant growth and to bring the tree to a more normal condition—one suitable for bearing good crops every year.

Of pot plants, such as Ferns and Streptocarpi may be grown very well if placed where there is least light under the trees. Fuchsias also do well; so do Gloxinias, *Francoa ramosa* (Bridal Wreath), tuberous Begonias and some of the fibrous section. These must be grown on a low stage, or on boards placed on bricks on the border. When pot plants are grown on the stage over the border in which the roots of the fruit trees are growing, there is sure to be a constant drip when the plants are watered from time to time. The result is a soured surface soil of the border. Counteract its bad effect by carefully scraping off the top crust only, and then scatter a small quantity of dry unslaked lime on it.

With regard to ventilation, the contents of the house considered to be of most importance must have first consideration. Usually air can be admitted from this date, which will prove beneficial to both Peaches and pot plants.

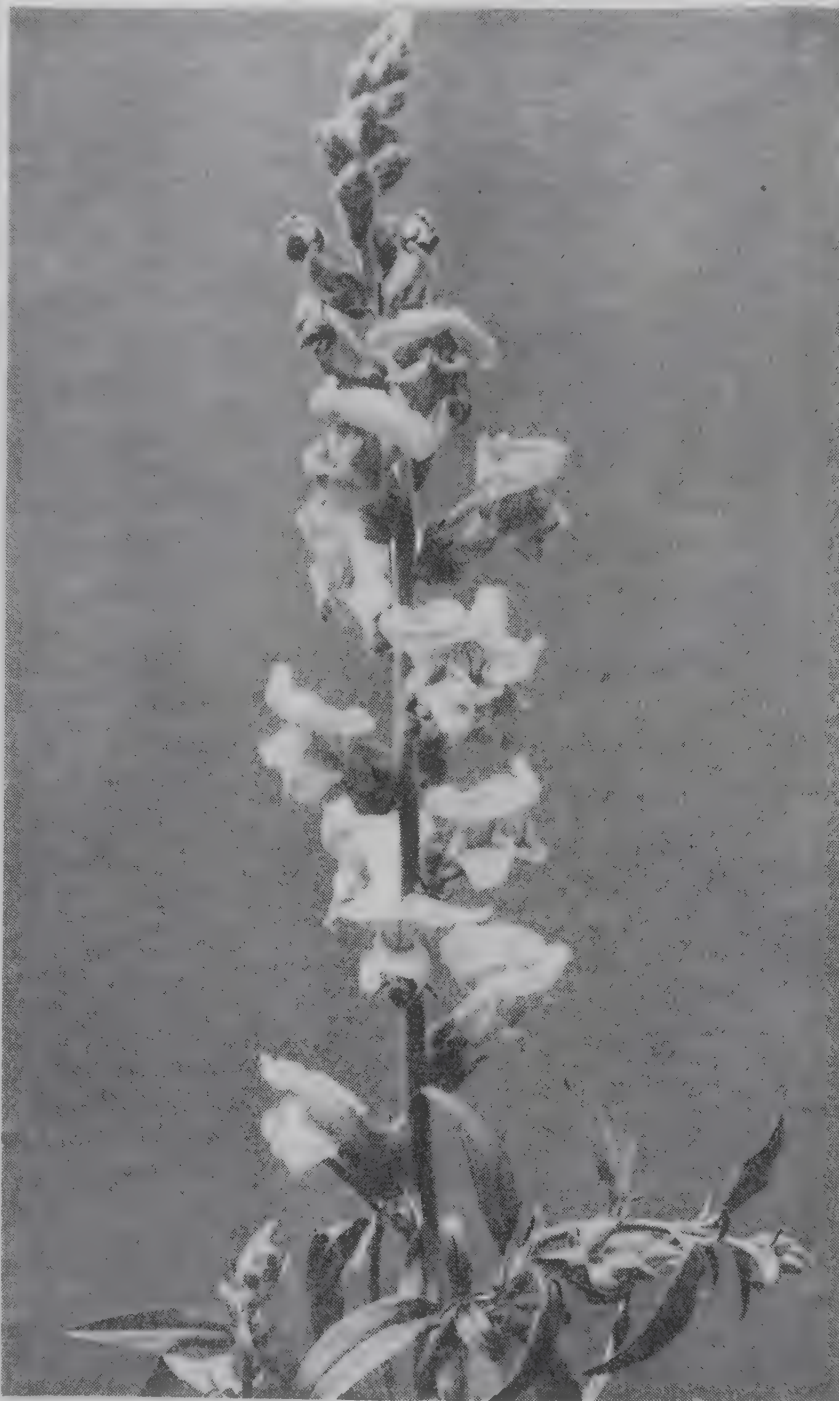
Watering the border soil is a very important matter, as the surface may be moist while the soil below is really dry.

GEORGE GARNER.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

***Pyrus Malus floribunda purpurea*.**—A very showy and good variety of a well-known plant. The colour of the flowers, however, is red, not purple, as might be imagined from the name. Exhibited by Mr. R. C. Notcutt, Woodbridge, Suffolk.



ANTIRRHINUM MELROSE, A NEW ROSE PINK VARIETY
SAID TO BE PERPETUAL FLOWERING.

***Arabis aubrietioides* Trevor Seedling.**—A particularly good deep-coloured variety of a valuable rock plant, which will be welcomed by all lovers of choice hardy flowers. The plant is vigorous in habit and free-flowering, and, rightly used, is capable of creating new features in rock or wall garden scenery. From Mrs. E. Lloyd Edwards, Bryn Oerog, near Llangollen.

***Clematis montana superba*.**—Some half-dozen specimen plants of this fine variety of the Mountain Clematis were shown in conjunction with the typical kind to display their worth. The flowers are snow white, larger and much purer in colour

than either the type or its variety *grandiflora*. To good hardy climbers it is an additional plant of merit and distinction. From Messrs. George Jackman and Sons, Woking.

***Antirrhinum Melrose*.**—This is an obviously robust-growing form of the majus type, a pink-flowering and—it is said—perpetual-flowering variety to boot. It has been exhibited on more than one occasion of late, and the question that naturally arises is: Would not other varieties specially treated do just the same? As shown it was very charming, and of a delightful pink shade. It is, we believe, grown largely in America.

From Messrs. W. Wells and Co., Merstham.

***Campanula cenisia alba*.**—Those who know the great charm of the typical rock-loving *Campanula cenisia* will welcome this pure white form of it, which is at once good and choice. That it may baffle the attempts of the amateur at the start, we are quite prepared to admit; but if those who seek to grow it to perfection will starve it, make it what it really is, a purely saxatile species, all will be well. It is really a delightful plant. From Messrs. R. Tucker and Sons, Oxford.

***Polyanthus Orange King*.**—The solitary plant shown of this evidenced a remarkable break in colour, combined with great vigour. The dominant colour shades are orange and red, with a groundwork of old gold colouring. It is many years since an award has been granted to a variety of this group, but no plant has more justly merited it than the above. From Mrs. Ellis, Lincoln.

***Hydrangea Lillie Mouilliere*.**—A deep pink-flowered variety of considerable attractiveness and merit. It is apparently an easy doer. From Messrs. Stuart Low and Co., Enfield.

***Tulipa stellata*.**—A delightful plant in every way. The dominant colour of the rather long, lance-shaped petals is golden, the exterior of the outer petals flamed scarlet and bordered with white. A charming rock garden plant. From Messrs. Barr and Sons, Covent Garden, W.C.

All the foregoing were shown before the floral committee of the Royal Horticultural Society on the 21st ult., when the awards were made.

***Primula Ville de Nancy*.**—A very showy novelty with rich rose carmine flowers, whose pronounced lacerated petals produce a distinctly fringed characteristic. The new-comer is apparently one of the *cortusoides* x *Veitchii* hybrids, and in the soft downy foliage bears strong resemblance to the last-named species. From Messrs. Piper, Bayswater and Barnes.

***Amygdalus persica rosea flore pleno pendula*.**—A fine standard of this, with stem 7 feet or so high, was shown to demonstrate the good pendulous habit of the variety. The flowers are rich rose colour and very attractive. Shown by Mr. L. R. Russell, Richmond.

These two novelties were granted awards of merit by the Royal Horticultural Society on April 15.

RAISING ORCHIDS FROM SEED.

ONE of the most progressive signs in horticulture is the fact that in almost every garden there is a desire to improve the different classes of plants, and to this end thousands of seedlings are raised annually. Orchids are no exception to this rule, and as seeds of most rare plants are usually offered



SEEDLING ORCHIDS POTTED SEPARATELY IN SMALL POTS. SOME ARE SHOWN PLUNGED IN A LARGE PAN OF COCOANUT FIBRE REFUSE.

for sale, I see no reason why the great Orchid firms should not do likewise. The price, of course, would depend upon the value of the plants used for crossing and the possibilities of securing a percentage of good varieties out of the resultant seedlings. Plants with seed-pods have already been offered for sale, and if amateurs could buy seed, there would, no doubt, be a great impetus given to the trade.

The illustration above shows a pan of *Cypripedium* seedlings a few months old, the largest being placed singly in 2-inch pots and the smallest plants two in a pot. I have chosen *Cypripediums* because they are easily raised, and any amateur who contemplates taking up this interesting branch of orchidology would do well if he or she started with *Cypripediums*, or any of the terrestrial kinds.

When to Sow.—Seed should be sown, directly it is ripe, around the base of older plants belonging to the same genus for preference, although this is not essential. Select a specimen that will not require repotting for at least twelve months, and see that the surface is free from moss or any growth that is likely to choke the seedlings or impede germination. The soil ought to be just below the rim of the pot; then there is not so much fear of the seed being washed away. Several plants should be picked out for this purpose, because it often happens in the most up-to-date establishments that seedlings only germinate on one pot or seed-bed.

How to Sow.—After giving the host plant a good watering, the seed may be sprinkled evenly over the soil with the blade of an ordinary knife. From now onwards the soil must never become dry, but extreme care should be exercised in giving water. If seed is sown in only a few pots, the receptacle may be stood in saucers of water

until it rises to the surface, and, failing this method, a fine-rosed watering-pot can be employed. With ordinary care and attention, germination will take place in six weeks or two months, as a general rule; but the grower must not be impatient in this respect, as I have known seedlings to appear twelve months and even longer after the time of sowing the seed.

Removing the Seedlings.—When they have made one or two tiny leaves, they may be removed with a pointed stick and placed singly in a 2-inch pot, as shown at the bottom of the illustration.

The pots are filled with sphagnum moss, cut up rather finely, and all the large heads are picked off when sorting out the rubbish and slugs. When all the seedlings have been planted, the pots are plunged in some old peat or other moisture-holding material, as shown in the first illustration, and lightly sprayed over directly the moss looks dry. As growth advances, larger receptacles must be provided, and a little fibrous peat incorporated with the sphagnum moss. It is essential that the plants should be kept continually growing until they reach the flowering stage. A moist, buoyant atmosphere must be maintained, especially during the spring and summer months, and a minimum temperature of 55° to 60° Fahr. Shade them from all strong sunlight, and never allow

them to suffer from dryness at the roots. An important factor in the raising and growing of Orchid seedlings is cleanliness, for, if once they get a bad attack of thrip, it takes them a long time to recover. Where this pest is present, the house must be vaporised at once, and another good plan is to spray the plants with a solution of some reliable insecticide at fortnightly intervals.

T. W. B.

AURICULAS FROM SEED.

THE enthusiastic grower of Auriculas will be anxious to raise some seedlings, and at this season, when these beautiful flowers are appearing, a short note on the subject may be useful, for the late Mr. Ben Simonite says a man is not worthy of the name of florist if he does nothing in the way of seedling-raising to improve the flowers he cultivates.

The selection of parents is very important, and only the best varieties should be crossed. It is also advisable to mate a green-edged variety with another belonging to the same group; selfs should be crossed with selfs, and so on; while among the alpines the yellow-centred forms should be crossed together, and this remark also applies to the white

and cream centred kinds. Having selected an Auricula which it is intended to use as the mother plant, the anthers must be removed with a pair of sharp-pointed scissors before the pollen is distributed. When performing this operation, hold the plant in such a position that none of the pollen cases falls down the tube. After two or three days the stigma of the prepared flowers may be dusted over with pollen from another bloom, using a fine camel-hair brush to convey the pollen. The seed should be sown directly it is ripe, viz., about July and August, in seed-pans or ordinary flower-pots. These are filled one-third of their depth with drainage, and the usual potting compost employed. Germination is sometimes rather slow, and after pricking off the first batch the seed-pans may still be retained, because other seedlings will eventually appear. When the young plants have made their first leaf after the two seed leaves, they can be pricked off at the rate of about a dozen in a 3-inch pot. As growth advances they should be placed three in a similar sized receptacle, and at the next potting one in a pot, while a 3½-inch or 4-inch will be large enough for their final move. It usually takes about eighteen months for a seedling to reach its full size. A suitable rooting medium consists of good fibrous loam two parts, leaf-mould one part, and decayed cow-manure one part, which ought to be well mixed three weeks or so before it is required. S.

ERICA AUSTRALIS.

AMONG the early flowering Tree Heaths this species is deserving of notice, as it follows in succession those fine and now fairly well-known species *E. arborea*, *E. codonodes* and *E. Veitchii*, although distinct by reason of the colour of its flowers, which are purplish red and produced in great profusion from March to July. In height it grows from 4 feet to 6 feet. A fine colony of this in full flower, associated with the other species noted, attracted my attention in a Heath border in Dr. Wallis' garden at East Grinstead, Sussex; while as an edging to these taller-growing species, masses of *E. carnea*, *E. cinerea* and many others gave promise of an interesting and attractive feature to be continued for some time hence. Where space allows, a Heath border can be made, one of the most interesting features in a garden, as the wealth of material capable of being utilised, as well as the extended flowering period, provides a display of colour through nearly all the months of the year.

Lindfield

E. S.



SEEDLING ORCHIDS AT VARIOUS STAGES OF GROWTH. NOTE THE INCREASED SIZE OF THE POTS ACCORDING TO THE SIZE OF THE PLANTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Plum and Cherry Trees in Pots.—Trees which are carrying a good crop of fruit may now receive more liberal treatment. Give frequent applications of liquid manure, and always in sufficient quantity to reach the extremities of the roots. Syringe the trees twice daily and shut up the house early in the afternoon, making the most of sun-heat. Disbudding must be carefully performed, removing all superfluous and misplaced shoots as soon as possible, but it is a mistake to remove too many at one time.

Early Peach and Nectarine Trees in Pots.—The fruits on these trees will now be approaching the ripening stage and should be fully exposed to the sun. A temperature of 65° or 70° at night will suit them well. As the fruits are ripening, syringing should be discontinued, and the ventilators left slightly open at night.

Late Vines.—The Vines in late houses require disbudding, and the most forward growths should be stopped in order to distribute the sap evenly over the Vine. Do not allow the shoots to come in contact with the glass, or they may become damaged by scalding. If the borders are restricted, careful attention will be necessary, so that the Vines may not suffer from want of moisture at the roots. In the case of shy-setting varieties, this must be carefully observed, so that no watering of the border will be necessary during the flowering period.

Plants Under Glass.

Humea elegans.—Plants which have been wintered in 6-inch pots will now be ready for their final potting. Let the pots be clean and thoroughly drained. A compost of turfy loam and leaf-soil in equal parts, mixed with rough silver sand and wood-ashes, will suit them well, and this should be made moderately firm about the roots. Water the plants a day previous to potting, and if the soil is in good condition, no further watering should be necessary before the roots have reached the edge of the pots, when a good watering may be given. Grow the plants in an intermediate house until re-established, after which they may be used for the conservatory or greenhouse. *Humea* plants intended for the flower garden may be allowed to remain in 6-inch pots until the time arrives for placing them in the open.

Caladiums.—Young plants started in small pots should not be allowed to become root-bound, but should be potted into larger pots as soon as ready. The soil may consist of turfy loam, peat and leaf-soil in equal parts, with sufficient rough sand to keep it open. Water sparingly until the roots are through the new soil, after which a good soaking may be given. *Caladiums* grow best in a warm, moist atmosphere, and should be protected from strong sun.

Salvia splendens.—Young seedlings raised early in the year should be potted as soon as ready, in order to encourage clean, healthy growth. Rich loam and leaf-soil, with a good sprinkling of sand, will suit them well. Place the plants in a close cool pit for a few days after potting, but as the season advances they may be grown in the open. Stake each plant separately, and secure to a wire as a protection against rough wind.

Gloxinias.—Young plants should be carefully potted up before they become pot-bound. With increased sunshine, more atmospheric moisture will be necessary, but overhead syringing should be discontinued as the flowers begin to open. Successional plants ought to be potted up as they become ready, and never allowed to become cramped for want of root room.

The Flower Garden.

Standard Plants intended for the flower garden will now be ready for removal to cooler quarters, in order to harden and prepare them for planting in the open. *Fuchsias*, *Pelargoniums*, *Heliotropes*, *Swainsona*, *Calceolaria amplexicaulis* and *Veronica Andersonii variegata* are suitable for this purpose, and should be thoroughly hardened before they are planted out.

Plant Out seedling *Pentstemons*, *Antirrhinums* and summer-flowering *Chrysanthemums* with as little delay as possible.

Primroses may be divided now and planted in the shrubbery or on the banks of the lake. Surplus plants of *Primula kewensis* and *P. obconica* may be planted in a similar position, and if slightly shaded by surrounding trees so much the better.

The Kitchen Garden.

Peas.—A good sowing of Peas should be made now for use in July and August. Sow the seeds thinly in trenches 4 inches deep and cover with 2 inches of fine soil, leaving the remainder of the soil to be carefully worked in among the plants before the sticks are placed in position. If the soil is dry at the time of sowing, the seeds may be lightly trodden into the drills previous to covering with soil, as this will hasten germination by several days. *Gradus*, *Matchless Marrow* and *Royal Salute* are good varieties for this sowing.

Spinach.—This is an indispensable crop in summer, and requires great care to bring it to perfection, especially in hot, dry weather. As the season advances, the situation chosen should be protected from strong sun as far as possible. A border facing north or east should answer the purpose well. *New Zealand Spinach* makes an excellent substitute for ordinary *Spinach* in dry, hot weather, and should be sown in drills 3 feet apart. The warmer the weather the better this plant seems to grow.

Broccoli.—The seeds should be sown without delay to produce plants for next winter and spring supplies. *Autumn Broccoli* and *Hallow-e'en Giant Cauliflower* should be included in this sowing. This Cauliflower is indispensable for late autumn supplies. The heads are well covered with foliage, and remain in good condition for a long time. *Savoys*, *Coleworts*, *Copenhagen Early Cabbage*, *Christmas Drumhead* and *Dickson's Dwarf Green Gem* should be sown now, also *Broccoli*. April is the worst month to contend with so far as a full supply of choice green vegetables is concerned, and for this purpose we sow *Harbinger* and *Milecross Cabbage*, *Dickson's Omega Savoy* and several varieties of *Broccoli*.

Tomato Plants for outdoor cultivation should now be ready for potting into 6-inch pots. Keep the plants in a close pit for a time, and water sparingly until the roots have reached the edge of the pots, after which liberal waterings should be given, and the plants gradually prepared for planting out at the end of the month.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Asparagus.—This crop is now in bearing, and it is important that the cutting should be done with caution, otherwise much damage may be done to the crowns. In very cold districts it is a good plan to cover the bed with some litter, not only as a protection from frost, but by this means I have found one gets much more tender shoots.

Cauliflowers.—A sowing may be put in now to give a supply in October, which will be found to be of immense use at that time. A small quantity of guano put in the water will not only act as a fertiliser, but will in many cases ward off the maggot, which is so troublesome in dry seasons.

Peas.—Continue to make successive sowings of the main crop varieties, and those that are coming on should have sticks placed to them when they are 6 inches high, as it is most important that they be kept growing upright. Before sticking, earth up the rows on both sides, which will, to some extent, prevent the plants suffering in hot, dry weather.

The Flower Garden.

Liliums.—Where these are intended to form part of the bedding arrangement, they will now be so far advanced in growth that they may be safely transferred to the open. I always find they never make such fine specimens when allowed to become the least pot-bound. In proof of this, nowhere do we find such handsome spikes as when they are grown in favoured districts where they remain in the ground all the year.

East Lothian Stocks.—If these have been sufficiently hardened off, they should be planted out at once, as there is nothing gained by keeping

them standing in boxes. Before planting, give the soil a dressing of finely ground lime, and in planting allow at least 15 inches to 18 inches between the plants.

Planting Perpetual-Flowering Carnations.

For the past year or two these flowers have become increasingly popular as bedding plants, and, if carefully managed, will succeed well in most situations. Many use old plants that have flowered indoors, but young plants rooted in the autumn make by far the finest display. Perhaps the best method of treating these *Carnations* for this work is to layer some old plants in frames in the autumn as one does the *Malmaisons*. I find we get stronger plants in this way. Young plants which have been pinched should now be planted. These will give a display when the ordinary border varieties are over.

Lawns.—Where bulbs are grown on the lawns, the work of mowing has of necessity to be delayed. No time, however, should be lost in getting to work as soon as the foliage is sufficiently decayed. In such cases, of course, it will be necessary to go over the lawns with the scythe for the first cutting. This will remove all inequalities, after which it should be gone over with a broom to remove worm-casts and other refuse before the lawn-mower is brought into use.

Plants Under Glass.

Cinerarias.—If it is intended to have these in bloom about the end of the year, a small sowing may be made now. In doing so see that the mixture contains a fair amount of leaf-soil free from wireworm, and after sowing place the seed-pan in a cold frame, as *Cinerarias* resent at any stage of their growth the least semblance of coddling. That being so, it is important that the seed is sown thinly, and the seedlings pricked out as soon as they show the second leaf.

Chrysanthemums.—Continue to admit air freely to plants in frames, although it will still be necessary to close the lights at nights. Examine the plants frequently for rust and mildew, and if the slightest sign of rust appears, the leaf should at once be removed, while in the case of mildew a slight dusting with sulphur will in most cases check it. A start must now be made in cutting down plants intended for decorative purposes. After they have been cut back, the frame should be kept closed for a time, and the plants syringed at least twice a day to induce them to break.

The Hardy Fruit Garden.

Strawberries.—Time must not be lost in getting straw placed between the rows to keep the fruit clean. This will also act as a protection. The plants should on no account be allowed to become dry at the roots when they are in flower. On young plants not intended to fruit this season the runners must be cut off as they appear. This will assist in building up the crowns for next season.

Fruits Under Glass.

Vines.—Grapes colouring should have a free circulation of air and the moisture considerably reduced. If the border is sufficiently moist, it may be covered with some sweet meadow hay. This will prevent evaporation and present a clean and tidy appearance. Vines in succession houses will require attention, reducing the bunches and thinning. Such large-berried sorts as *Gros Colman* and *Madresfield Court* ought to have the berries well thinned out at the beginning.

Orchard-House.—As the fruits will now be swelling, the syringe should be used freely to keep the foliage free from fly and caterpillars, which can be detected by the tender foliage curling up. The latter are best destroyed by hand picking, while the fly can be held in check by the syringe or fumigation. Gradually reduce the fruits to the required number, and allow the temperature to be considerably increased.

Melons.—To have a supply of ripe fruit for August 12, the seed should be sown this week. This will be found to be the best crop of the season, inasmuch as it is on during the hottest months of the year. Where one has to depend on hot-beds and frames for their supplies, this would also be the best time to make a sowing. The plants should be ready for putting out about the first or second week in June.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLETS UNHEALTHY (H. K. K.).—We could find no disease on the Violets, and think that possibly they have been kept too close. They require abundance of air and thorough drainage, otherwise they are liable to the attack of botrytis, which causes the leaves to damp off.

DAFFODIL BULBS ROTTING (G. B. C.).—The insects referred to are springtails, and we are doubtful whether they are the primary cause of the rot of the Daffodil bulbs, as they feed for the most part on decaying vegetable matter. It would be impossible to say at this season what the primary cause of the trouble is, but it is quite probable that it is the fungus *Fusarium bulbigenum*, which is doing so much damage this season to Narcissus bulbs.

PLANTS FOR ROOF GARDEN (E. S.-N.).—As you desire evergreen, and presumably carpeting plants, we think such Sedums as acre and album the most suitable. Associated with these a central group of the Cobweb Houseleek (*Sempervivum arachnoideum*) would be very attractive. You might, indeed, cover the whole roof with this plant alone, seeing that it is interesting at all seasons. By disposing it among small blocks of sandstone, a picturesque effect would be produced. If to this white-looking species you would like a contrasting comparison, we suggest the dark green, prettily formed *S. montanum*. In these two you would have free-growing, eminently suitable kinds. We do not think the Iris would be suitable for your purpose.

NARCISSUS DISEASED (Miss S. W. H.).—The Narcissus is attacked by yellow stripe disease, the cause of which is unknown. It is not likely to spread this season, but seems possibly not unconnected with soil conditions of an uncongenial character. Some varieties are more subject to it than others, and plants often "grow out" of it. White Lilies are most likely to be attacked by the Lily disease when they have been open to check by cold winds, or by frost while they are in a growing condition. It would be well to shelter them as far as you possibly can by twiggy sticks or something of that kind from cold winds and draughts, so that the chance of such a check is reduced to a minimum. Possibly an occasional spraying with a solution of potassium sulphide, at the rate of one ounce to three gallons of water, would be of assistance in warding off an attack.

ROCK GARDEN.

TUB IN ROCKERY (Miss L. N. S.).—If you remove the goldfish from the tub in your rockery, it is possible that the water will keep clear. If, however, you decide to do away with the water plant, the tub can be formed into a small peat bed by making holes in the bottom, then placing a foot of broken bricks and clinkers over the bottom. On this place good turves, grass-side downwards, and fill up with a mixture of sand and peat. In it *Rodgersia pinnata* might be planted, or some of the low-growing

Gaultherias or Vacciniums. By using loam instead of peat, *Iris sibirica*, *I. laevigata*, various Primulas and other plants may be grown. If, however, you decide to do away with the water, we think you would find it more satisfactory to remove the tub and use its position for ordinary plants.

TREES AND SHRUBS.

HORSE CHESTNUT FLOWERING EARLY (X. Y. Z.).—It is quite usual for certain specimens of the Horse Chestnut to be several weeks earlier than others in developing leaves and flowers. This phenomenon has given rise to the varietal name of *præcox* being added to the typical *Æsculus Hippocastanum*, to identify the early from the later forms. When a large number of Horse Chestnut trees are growing together, some are usually found which are considerably earlier or later than the majority.

TREES FOR GRAZING LAND (A. J. B.).—You cannot do better than plant *Pinus insignis* in the position you describe. It is perfectly hardy in Cornwall and stands exposure well. It also grows very rapidly, and at twenty-five years of age ought to be from 35 feet to 40 feet high at least. Do not be tempted to purchase large plants; little ones, 1 foot to 2 feet high, will transplant better and be larger at the end of five years than others which might have been 5 feet or 6 feet high at planting-time. You can procure plants from any of the Cornish nurserymen, such as Messrs. Ruse or Messrs. Gill of Falmouth, or Messrs. Treseder and Co. of Truro. They may be from 6d. to 1s. each, or perhaps a little more; we cannot say accurately, as we have not a price-list of the firms named.

THE GREENHOUSE.

PLANTS NOT DOING WELL (Reader).—The plants are damping off, and have doubtless been kept too moist and close. It is essential that such plants as these should have ample circulation about them at all times, and a great help to avoid troubles such as these is to sterilise the soil into which the plants are to be pricked out.

CINERARIA LEAVES WITHERING (Chetwynd).—The appearance of the foliage of the Cineraria and your account of the trouble suggest that it is suffering from being brought into a dry atmosphere after having been grown in a fairly moist one. We think you might possibly get over this, to some extent at least, by hardening off the plants; that is, accustom them gradually to a drier atmosphere before bringing them into the house.

ADVICE ON THE ERECTION OF A GREENHOUSE (T. H. T.).—At the best, the erection of a new greenhouse on the site of an old conservatory would be only a very partial remedy for the trouble complained of. As the spot is so shaded, plants of a quick-growing nature are sure to run up tall and weak. The only remedy is to grow such subjects as Palms and Ferns, which do not object to a good deal of shade. For the erection of a greenhouse apply to one of the advertisers in THE GARDEN. For obvious reasons we cannot recommend any particular firm. All are thoroughly reliable.

TREATMENT OF TESTUDINARIA (G. G.).—As the roots of your Testudinaria show signs of bursting the pot, your better way will undoubtedly be to put it into a larger one. The new pot must be effectually drained, and a very suitable compost may be made of three parts of fibrous loam to one part of peat, with a sprinkling of broken brick rubble and sand. The plant should be potted firmly. We should not advise the use of any stimulant in order to encourage growth. If the pot is well drained, the plant may be freely supplied with water during the growing season, but in winter must be kept much drier. Being a native of South Africa, this Testudinaria should be wintered in a structure with a minimum temperature of 45° to 50°.

KITCHEN GARDEN.

TOMATOES IN BOXES (Nemo).—For single plants a box a foot long and 10 inches wide will be large enough. Top-dressings of soil and manure may be added in due course. If two or more plants are grown in a box, the latter should afford accommodation for the plants in due proportion, the box for a single plant being taken as a guide.

SOWING PEAS (R. G. B.).—Much will depend, of course, on the variety as to the length of the row a pint, for instance, will sow. The shorter and less robust varieties should naturally be sown thicker; thus one pint should be evenly distributed over 70 feet, and for the taller and stronger varieties, such as *Quite Content*, for instance, allow one pint to 100 feet. Unquestionably, Peas, as a rule, are sown much too thickly, the result being that the plants become starved and the duration of the crop is short. Much better results follow by allowing the plants of the stronger-growing varieties from 6 inches to 8 inches in double lines.

FRUIT GARDEN.

BETTER IN VINERY (F. H.).—The beetles are Vine weevils, and often do great damage. The larvæ feed on the roots of various greenhouse plants. Spread a sheet on the ground after dark under the Vines, and then either shake them or shine a bright light upon them, when the insects will drop to the ground, feigning death. Collect them and tip them into a bucket of hot water or water with a layer of paraffin on the top.

STRAWBERRY PLANTS DISEASED (A. B.).—Your Strawberry plants are attacked by the Strawberry leaf spot fungus (*Sphaerella fragariae*). The best remedy for this disease is to cut off all the leaves in August and allow

them to dry on the bed; then set fire to them and burn them where they lie. This will do no harm to the Strawberry plants, and will tend to destroy the fungus. The only thing that can be done at this season is to spray at frequent intervals with potassium sulphide, one ounce to three gallons of water.

PEACH SHOOTS FOR INSPECTION (B. A. J.).—The pest on the Peach is the Peach scale, *Lecanium persicae*. It is to be regretted that measures were not taken in the winter to deal with the pest, for Peach tree foliage is exceedingly sensitive to all sorts of sprays and fumigants, so as to render it dangerous to use them so strong as to kill pests. Probably fumigating with hydrocyanic acid would be the best check, but it is dangerous to apply. This month the eggs of the pest will hatch, and as soon as this happens (and careful watch should be kept), the house should be fumigated with XL All or some similar fumigant.

MISCELLANEOUS.

GRUBS INFESTING SOIL (O. P. Q.).—The grubs sent for identification are the larvæ of the crane-fly, often destructive on lawns and flower borders. Repeated rolling in the evening will often destroy these pests on lawns. In the flower borders you should use Vaporite, and destroy the larvæ on all possible occasions.

VARIOUS QUESTIONS (A. G. M.).—*Antirrhinum Asarina* can be rooted in September under a bell-glass, as one would treat the common *Antirrhinum*. Planted in a warm spot in a fairly rich sandy soil, it will usually survive several years. *Primula Forrestii* is doubtfully hardy in this country, but is undoubtedly more resentful of damp than of cold. The soil in which it is planted must be thoroughly drained, and the plants protected from damp accumulating in their crowns.

WALL PLANTS FROM JULY TO SEPTEMBER (B. M. O.).—The period mentioned in your letter is the weakest for obtaining an effective display in the wall garden, though there are a few plants which are indispensable. The majority, however, are over by the end of June, though in your northern district the flowering may be later than usual. The following are among the best things: *Achillea tomentosa*, yellow; *Campanula muralis*, which usually gives a second flowering; *C. garganica*, in three varieties; *C. Profusion*, certainly one of the best; *Corydalis lutea*, charming in leaf or flower at any time; the *Edelweiss*, *Polygonum vacciniifolium*, *Achillea umbellata*, *A. Heuteri* and *Clavennæ*, and *Zauschneria californica*, the last most effective, with scarlet flowers. How much success might be achieved depends not a little upon the nature of the wall and the method of planting; but by colonising the best—arranging them, that is, in free masses—a good display is possible with but a few kinds. The Cobweb Houseleek is a good plant at any time, and, well placed, always attracts attention. There are others which might extend into July, but would not be effective for any length of time.

DESIGN FOR SUNK GARDEN (V. M. D.).—There is one serious defect in the design for the sunk garden as we understand it from your letter. The proportion is not at all good, the garden being much too narrow for its length. The least width permissible for a garden 118 feet long should be 40 feet, viz., width equal one-third length. If you have not room to widen out the area (when a much more attractive design for beds would be possible), we think you would do well to slightly alter the path design, as shown in Plan I. In the narrow borders at the base of the wall we would plant *Iris pumila*, *Aubrietias*, *Campanula pusilla*, *Dianthus*, *Viola gracilis* and other small-growing plants of similar nature, which would give the effect of a herbaceous border in miniature. The edges of borders along paved walks should be planted with small creeping plants, like *Gypsophila repens*, *Thymus Serpyllum*, *Arenarias*, &c., that would creep partly over the edges of the paths. The circular beds could be planted with *Lavender* or *Rosemary*. The effect of introducing the circles will be to alleviate the monotony of so many straight lines. If it is possible to widen out the centre portion of the garden, as shown in Plan II., a much better effect could be produced. Borders on the top of the walls (we presume they are retaining walls, and not built above the ground level), so that you can get trailing plants to hang down the walls, are necessary to complete the design.

VARIOUS QUESTIONS (A. G. T.).—The question of inducing Hydrangeas to produce blue flowers has of late years aroused a good deal of interest. The change in colour from the normal type is often attributed to the presence of iron in the soil, and it has been applied in various ways, but not always with satisfactory results. There are two preparations on the market for turning the flowers of Hydrangeas blue, namely, *Azure*, which is a speciality of Messrs. William Cutbush and Son of Highgate, and *Cyanol*, which is, we believe, a Continental preparation. Messrs. Cutbush have several times shown very fine blue flowers, which have been treated with *Azure*. The presence of lime in the soil is very detrimental to the production of the desired blue tint; hence the plants should never be given water that contains chalk. Rain-water is the very best. It would have been better if you had commenced applying the preparation earlier, but if your plants are not far advanced it will, no doubt, be in time. Painters' knotting is often used to check the bleeding of Vines, the cut surface being sealed beforehand with a red-hot iron. Dusting the fronds of your Ferns with soot or sulphur will do little towards checking the injury done by woodlice or small snails. Woodlice can be readily trapped by cutting some Potatoes in half and scooping out part of the interior. Then make a notch in one side of the Potato and place it concave side downwards on the stage. The notch will allow the woodlice to get underneath the Potato, which should be examined

in the morning, and the pests dropped into some boiling water. Small pots, with a little dry moss therein, laid on their sides where woodlice congregate also form good traps. They must, like the Potatoes, be examined in the morning. The small snails should be sought for, when dark, by the light of a candle.

NAMES OF PLANTS.—*James Ward*.—The Snowy Mespilus (*Amelanchier canadensis*).—*F. W. A.*—A variety of *Heuchera sanguinea*, but which it is impossible to say from specimen. There are many varieties and hybrids.—*Black Hambro*.—*Rubus spectabilis*.—*J. J.*—Seedlings of *Narcissus Poeticus*.—*Mrs. G. C. G. Poynton*.—The coniferous plants are *Cupressus lawsoniana* and *Cupressus sempervirens* (small). The Maple is *Acer monspessulanum*.—*A. C. P.*, *Ivybridge*.—*Erica hybrida*, an early flowering hardy Heath.—*Doubtful*.—1, *Acanthus mollis*; 2, *Romneya Coulteri*; 3, *Amygdalus nana*.—*W. H. J.*, *Kent*.—1, *Kalmia latifolia*; 2, *Allium neapolitanum*.

SOCIETIES.

THE MIDLAND DAFFODIL SOCIETY'S SHOW.

ONCE more this show, which was held on April 23 and 24, was full of interest, both to the Daffodil experts and to the general public. The show, as usual, took place in the Edgbaston Botanic Gardens, Birmingham, and here we would take the opportunity of thanking both Mr. Herbert Smith (secretary of the society) and Mr. T. Humphreys (Curator of the Gardens) for their un-failing courtesy, and to congratulate them on the success with which the exhibition was carried through. Owing to the recent spell of warm and sunny weather, the early blooms were past their best. Only a comparatively few of the early trumpets were on view. That magnificent yellow self trumpet King Alfred, which usually makes such fine splashes of colour at Birmingham, was only to be seen on one or two stands at the most. There was, however, a wonderful display of white blooms, and seldom have we seen Poets so plentiful at any Daffodil show.

COMPETITIVE CLASSES.

Speaking generally, competition was very keen, with the result that the whole of the exhibition space was filled with blooms of high quality.

In Class 1, for a collection of fifty varieties of Daffodils, there was a keen fight for supremacy. Messrs. Cartwright and Goodwin were successful, among the pick of their varieties being Loch Fyne, White Knight and White Wolf. Mr. C. Bourne, the Rev. J. Jacob and Mrs. Ridley followed in the order named, each of them showing collections representing the different sections of the Daffodil.

Class 2, for a decorative exhibit of cut Narcissi only, arranged against a wall on a space 9 feet by 4 feet, brought together many beautiful and effective groups. The first prize went to Mr. C. Bourne; second, the Rev. J. Jacob; third, Mr. J. A. Kenrick, Harborne. In all of the exhibits the association of Daffodils and foliage plants was very pleasing.

Messrs. E. H. Krelage and Sons were very successful in the classes for trumpet Daffodils, and secured premier awards for six white, six yellow, and the single bloom white trumpet. Their beautiful white trumpet variety Mrs. Ernst H. Krelage was one of the features of the show.

Mr. C. Bourne was most successful with the incomparabilis section. Among other successes, he gained first prizes for six incomparabilis, six Barrii in two classes, and six varieties of any section that have not been in commerce more than four years.

Messrs. F. Herbert Chapman, J. Pope, R. Bruce Waite, A. M. Wilson, E. M. Crosfield, W. F. M. Copeland, S. F. Staffurth, Mrs. Ridley and the Rev. T. Buncombe were all winners of first prizes, and there were others in the field, all of whom contributed to the success of this great exhibition.

The Rev. J. Jacob was another successful exhibitor, gaining first for one of the six incomparabilis classes, and again for twelve Leedsii, while he was a runner-up in several classes. His vase of a seedling named Hela among varieties not in commerce was greatly admired.

As already mentioned, Poets were freely shown. Class 13, for nine varieties of true Poeticus, brought many competitors. The first prize and the Cartwright Challenge Cup deservedly went to Mr. E. M. Crosfield. His blooms of Ring Dove, Lovelace, Iliad and Socrates were each seen in the height of perfection. Mr. Crosfield was also first for twelve varieties that have not been in commerce

more than four years. Here he was showing Orb and Ring Dove in tip-top form.

The Herbert Chapman Poeticus Trophy for six varieties of true Poets that have not been in commerce more than four years was won by Mr. A. M. Wilson. Mrs. E. M. Crosfield won the Walter Ware Challenge Cup for eighteen varieties of obvious triandrus hybrids, and the White Daffodil Trophy for six white trumpets was won by Messrs. E. H. Krelage and Sons.

It is not likely that double Daffodils will ever become really popular. One of the best varieties of this class is undoubtedly Mary Copeland, a cream-coloured variety with a bright apricot and suffused centre. It was shown by Mr. W. F. M. Copeland, and received a first prize.

Mr. F. Herbert Chapman was first for three Daffodils not in commerce. In this class nine flowers were arranged in each vase. The effect of showing varieties in this way is very pleasing and might well be more often adopted.

For a collection of twenty-four varieties, open to amateurs only, Mr. S. F. Staffurth was first with a nice lot of fresh-looking flowers, in which Gloria Mundi, Weardale Perfection and Longfellow were perhaps the pick of a very good collection.

The Rev. T. Buncombe was first for six true Poets: his blooms of Orange Ring, Cassandra and Juliet were worthy of special mention.

Mr. R. Bruce Waite proved a very successful amateur

TRADE GROUPS.

Gold Medals.—Messrs. Barr and Sons, Covent Garden, filled one end of the exhibition hall with a magnificent and varied group that deservedly gained the society's gold medal. Poets formed a strong feature of the group, while King Alfred, Lord Roberts and Monarch were among the varieties which created bold splashes of golden yellow.

Messrs. Bakers, Wolverhampton, had a remarkably good rock garden suitably planted with Saxifrages, Primulas, Phlox Laphamii, Ranunculus amplexicaule, Irises and Genistas. The alpine were neatly planted in pockets between large boulders of sandstone.

Silver-gilt Medals.—The Rev. G. H. Engleheart, Dinton, Salisbury, showed an intensely interesting collection of seedlings of varied forms. The collection excited the keenest interest among Daffodil experts.

Mr. A. M. Wilson, Shovel, Bridgwater, also showed seedlings under number, of very high quality. The varieties named Madrigal and Sonata were exquisite.

There were seedlings of great promise in Messrs. J. R. Pearson and Sons' group from Lowdham. Of the named varieties, Great Warley, Glory of Leiden and Lady Margaret Boscawen were remarkably good.

Messrs. Sutton and Sons, Reading, had a magnificently arranged group, in which every vase of Daffodils was set out to advantage. Albatross, Peveril, Mme. de Graaff and Weardale Perfection were all shown in perfect form.

Mr. C. Engelmann, Saffron Walden, put up an exquisite collection of Perpetual-flowering Carnations, Carola, Sunstar and Pioneer were particularly admired.

Silver Medals.—Messrs. Cartwright and Goodwin, Kidderminster, showed a very wide range of varieties, Glory of Noordwijk, Whitewell and Glory of Lisse, as well as Tulips in variety, were worthy of special note.

Mr. C. Bourne, Bletchley, who was very successful in competition, also had a glorious array of Tulips and a capital display of Daffodils in all their sections. The varieties Queen of Hearts, Seville and capital blooms of The Doctor were much admired.

Robert Sydenham, Limited, Birmingham, staged a representative collection, in which Poets were very prominent. A number of Tulips, such as the golden yellow Bouton d'Or, the mauve-coloured Rev. Ewbank and the crimson Pride of Haarlem proved very attractive.

Mr. H. N. Ellison, West Bromwich, showed Ferns and Cacti in great variety. Adiantums were well represented among the Ferns.

From the Donard Nursery Company, Newcastle, County Down, came a superb collection, in which the massive blooms of King Alfred stood out prominently. Gloria Mundi, too, was well shown, likewise Ethel Porter, Buttercup, Homespun and Seline Malone. This is the first time that we have seen an exhibit from this Irish firm, and they are to be complimented on the quality of the blooms that were shown.

Messrs. Reamsbottom and Co., Geashill, King's County, Ireland, showed St. Brigid Anemones in brilliant shades of blue, pink and scarlet.

Messrs. Walter T. Ware, Limited, Inglescombe Nurseries, near Bath, showed Daffodils of fine quality. The vases of The Doctor, Leo and Cleopatra were specially good, while some of the finest novelties were seedlings under number.

There were other non-competitive groups, including that shown by Mrs. Lloyd Edwards, Bryn Oerog, near Llangollen, comprising a number of new hybrid Saxifrages and the purple Aubrietia Lloyd Edwards.

DUMFRIES AND GALLOWAY GARDENERS' ASSOCIATION.

THE lecturer at the closing meeting of this association, held in the Wesley Halls, Dumfries, on April 25, was Mr. Oliver of Drumlanrig Castle Gardens. Mr. S. Arnott presided over a good meeting, and introduced Mr. Oliver, whose subject was "A Walk and Talk About Kew Gardens," illustrated by a large number of excellent slides, displayed on the screen by a lantern ably manipulated by Mr. W. A. Mackinnel. Mr. Oliver gave an excellent description of the gardens and their history and leading features, the capital views bringing out the points he wished to emphasise. Mr. Oliver, who was four years at Kew, afforded a large amount of information, new even to some of those who knew the Royal Gardens at Kew fairly well, and quite an enjoyable and profitable evening was spent. On the motion of the chairman, Mr. Oliver was cordially thanked for his admirable account of Kew.



NARCISSUS MRS. ERNST H. KRELAGE, WHICH GAINED AN AWARD OF MERIT AT THE MIDLAND DAFFODIL SHOW.

exhibitor, gaining the Barr Vase in addition to a silver medal.

Mr. C. Bourne gained the silver medal in the championship classes, 3 to 27, and Mr. E. M. Crosfield gained a similar award for his success in other classes.

AWARDS OF MERIT.

Mrs. Ernst H. Krelage.—A magnificent and refined white trumpet. Shown by Messrs. Krelage and Sons.

Idris.—A beautiful flower of the incomparabilis section. Perianth white, pale lemon cup prettily crinkled. Shown by Mr. W. A. Watts.

Evangelina.—Perianth large and white with overlapping segments and a much expanded clear yellow cup. It belongs to the Leedsii group. Shown by Messrs. H. D. Phillips, Limited.

THE GARDEN.

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NOTES OF THE WEEK.

The Chelsea Show.—Following our usual custom, our issue for the 23rd inst. will be a Special Double Number. This will be twice the size of an ordinary number and will contain a full review of the exhibits at the Royal Horticultural Society's Spring Show to be held at Chelsea on the 19th, 20th and 21st inst. Next week we shall publish a specially enlarged number, with full particulars of an interesting competition for planning and planting little gardens. Those desiring additional copies of these issues should order well in advance, as there is certain to be a large demand for them.

An Early Row of Peas.—When visiting the gardens at Lockinge, Wantage, Berks, on Saturday last we were particularly interested in a fine row of culinary Peas that were growing out doors beside the wall of one of the fruit-houses. The variety was Pilot, and the plants had nearly finished flowering, many pods 2 inches long being present. Mr. E. Harriss, the gardener, informed us that the plants were raised from seeds sown in boxes on January 13, and planted out in their present quarters about the middle of March. We think this creates a record for earliness in the district.

Rose Fortune's Yellow at Terregles.—A grand sight has been presented for some time by a large plant of Rose Fortune's Yellow on the roof of the large conservatory at Terregles, Dumfries, the residence of Mr. C. E. Galbraith. The structure is gay with other flowers, but this Rose almost monopolises one's attention, so fine is it with its flowers of large size, which are exceedingly fragrant. It is planted in the border, and is a picture of health and beauty. The flowers are literally in hundreds, and, especially when seen from the exterior, they have been immensely admired by visitors.

Two Beautiful Greenhouse Heaths.—At the last two or three meetings of the Royal Horticultural Society such grand flowering examples of *Erica cavendishiana* and *E. wilmoreana* King Edward VII. were shown so as to make one long for a return to favour of these charming flowers. The clear yellow blossoms of *E. cavendishiana* cause it to stand out conspicuously among greenhouse Heaths, and this newer form of *E. wilmoreana*, with its masses of reddish pink flowers, is a great improvement on the older kind. Although such a desirable Heath, the

early history of *E. wilmoreana* seems to be unknown, as also does that of the universally grown winter-flowering *E. hyemalis*.

A Beautiful Dwarf Iris.—The accompanying illustration represents a fine cluster of the charming little *Iris pumila* in Mr. W. A. Bilney's rock garden at Weybridge. Mr. Bilney writes as follows: "I find this a particularly easy plant to grow, planted in sandy soil with a little mortar rubble and in full sun. I never trouble to water it during the droughts we have on the fiery soil here. Divided soon after flowering, the plants increase at least fourfold in a season. It is specially well adapted for the alpine garden, as it is dwarf and very floriferous. I grow three

district it was flourishing in marshland amid acres of the common Marsh Marigold, another wilding that is not half so much appreciated as it would be did its possession entail a strenuous journey to Thibet or some other distant country.

Thinning Out Apricots.—In early districts the fruits will now be set, and one generally finds that Apricots set in clusters. They should be promptly thinned out, and in doing so take care to leave the most promising and best-shaped fruits. The trees must be attended to several times, as it will be found that they do not all set their fruits at the same time.

Japanese Maples in the Greenhouse.—Though the various Japanese Maples are not affected by

the winter frost, their young unfolding leaves are of so delicate a nature that the harsh weather so often experienced in the spring prevents them from giving of their best. A few, notably *Acer palmatum sanguineum*, will do well in most districts, while in sheltered spots many of them will thrive. Where the conditions are not so favourable for their outdoor culture, they form a very pleasing feature in the greenhouse, as with the protection thus afforded them the leaves, even of the more delicate kinds, develop without check, and retain their beauty for a considerable time. When a change is desired, they can be plunged out of doors.

A Beautiful Flowering Crab Apple.—The *Pyrus* family provides many beautiful flowering shrubs, and *P. floribunda* is one of the most graceful of them all. The blooms, which are borne in great



A BEAUTIFUL GROUP OF IRIS PUMILA IN A SURREY ROCK GARDEN.

varieties—dark blue, light blue, and yellow. The prettiest is the light blue, but the other two perhaps flower more freely."

Acres of Golden Gorse.—When visiting Bournemouth last week we were particularly pleased to find, in the Highcliffe district, many acres of Gorse flowering more freely than we have seen it before. In some instances the bushes were 10 feet, or even more in height, while others were not more than 10 inches. Yet every little shoot was a bouquet of brilliant golden flowers, which, when kissed by the early morning sun, created a picture such as it would be difficult to secure with any other wild flower. The Gorse is growing in all kinds of soil, from peat to sand, and in the Christchurch

profusion, are drooping, and suspended on rather long stalks. In the bud stage they are of a coral red, and as the blooms open they become lighter in colour. It is a very useful shrub for forcing, but when treated in that way the flowers are much paler, and when fully expanded are pure white. Either as a lawn shrub, bushy tree, or as standards to form an avenue—a splendid example of which may be seen at Paddockhurst, Sussex—it is most decorative. Neither budding nor grafting is necessary in the case of this Japanese flowering Crab Apple, as cuttings strike readily if formed of clean, well-ripened shoots and inserted in the open ground under conditions favourable to rooting.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

An Early Rose Bloom.—I do not know what date constitutes a record for a really good early Rose, but it may interest some readers of *THE GARDEN* to know we had a good flower of Climbing Mrs. W. J. Grant open on April 27. The plant is trained on a wall having a south-south-east aspect. C. T., *Highgate*.

Newly Planted Chionodoxas.—With regard to the various remarks that have appeared in your columns for some weeks past relating to established *versus* newly planted bulbs of Chionodoxas, in my opinion the reason why newly planted bulbs do not produce flowers equal to those of established ones is because the bulbs do not receive a fair trial. Too often they are left until the autumn before they are planted, lying in some dry store or bulb merchant's shop for three or four months at the time when they should be in the ground making roots. If the bulbs are planted at a good depth about June or July, they will produce flowers equal to those that have been planted a number of years.—F. G. PRESTON, *Botanic Garden, Cambridge*.

Salvia farinacea.—This is one of the perennial plants that it is convenient to treat as an annual. Being a native of Mexico it would probably not succeed in our colder Midlands, but in the better parts of our climate it is a charming and uncommon-looking flower of the later summer. There is a white variety, but the typical colour is a fine bright purple. When the spike is half developed it is curiously like an exaggerated form of Lavender. It enjoys a hot summer such as we have not often had of late. It may be raised from cuttings, but is most usually grown from seed, sown early in heat, pricked off and put out with other summer plants in May or June.—G. JEKYLL.

Sweet Pea Trainer or Support.—I found last year the best support for Sweet Peas, running up to 8 feet or 10 feet, is to run chair cane, the unpolished or second-class kind, between posts on each end of the rank at intervals of 6 inches in height to the top, which may be a bar of wood not too heavy, and to tie upright strands to these horizontal ones at the same intervals from the top to the bottom. This cane is cheap—about sixpence a quarter of a pound—is warmer than wire, and does not sag like string. It lasts for years. If soaked in water for ten minutes it is as easily tied as string, and stiffens when dry. I have never seen it mentioned in any gardening book, and thought you might mention it in *THE GARDEN*, to which I am a subscriber. The size of the cane I have used is No. 3 and No. 4. The strands run about 15 feet or 16 feet long.—E. RIGHTON, *Bristol*.

Bulbs for Spring Planting.—One is pleased to note (see page 215, May 2) that, after all, Mr. Arnott does not, in his heart, agree with late planting of these things generally, and that, as a matter of fact, what was written on page 191,

if I interpret the matter aright, was rather intended for the laggards than for the more zealous cultivator who, doing his best by a plant, requires from it its best in return. What we may do from time to time as a matter of convenience or expediency should not, however, cause us to recommend without qualification what, as Mr. Arnott admirably puts it, is opposed to "sound general practice." In these days Lilies are retarded by the million for obvious reasons, and much as one admires their flowers at all seasons of the year, one cannot close one's eyes to the belittling effects—chiefly of flowers and stature—produced. The principle is that of a small loaf being better than no bread; and, moreover, the future of the plants so treated does not concern us in the least. Year by year fresh supplies are forthcoming, and those that have



SALVIA FARINACEA, A LITTLE-KNOWN PLANT SUITABLE FOR SOUTHERN GARDENS.

been—it is human nature paralleled in the vegetable world—were only valued for what could be got out of them. It is not so, however, with all bulbous plants, and those in particular that the amateur would like to plant and see grow in beauty and stature each year. For such as these, the only royal road to success is that of planting in season and in reason. Just how far even the experienced cultivator may go—how far he may overstep the season's border-line of planting with impunity—is still, however, a moot point. Generally speaking, scaly and tunicated bulbs cannot be retarded—or even their planting deferred, which is the point at issue—with impunity; they suffer in the present, their future is hopeless or success jeopardised. On the other hand, certain corms

or tubers may long be preserved—mark the word!—by intelligent cultivators in the dry or dormant stage, with—I say it advisedly—comparative impunity. Hence I am afraid I cannot agree that "Belladonna Lilies can be obtained in quite good condition for planting in the middle of March." I know they are offered for sale at that time, and so, too, are Madonna Lilies, and we know why. A dry bulb of the former in mid-March has been out of the ground six months too long, its apparent soundness but a delusion and a snare, as its subsequent behaviour would abundantly prove.—E. H. JENKINS.

Eighteen Daffodils with Lasting Qualities.—In reply to "M. E. E.," page 202, issue April 25, I also grow flowers in pots for one window, and have found the following last well, though I use gas to light the room: Earliest yellow trumpets—Tenby (*Obvallaris*) and Excelsior; this latter is handsomer than Golden Spur. Bicolor trumpets—Mme. Plomp and Grandis; Mme. Plomp is perhaps the best of all; I love its happy, healthy-looking trumpets; they always seem to me to be sounding forth a triumphant "Te Deum Laudamus." Grandis is a good pot plant, with beautiful blue-green foliage. William Goldring is a graceful, swan-necked Daffodil, and W. P. Milner very like it in miniature. The bulbs of both are small, so that one can plant several in a pot, and produce a good effect; both have slender, drooping ivory trumpets. Two good yellow starry Narcissi are Frank Miles, "the frightened Daffodil," looking like a horse, with its ears laid back, just going to bolt; and Autocrat, who is not frightened at all, but well named. So is soaring Seagull, with its wide white wings (an excellent laster). Eucharis-flowered Ariadne and Katherine Spurrell are two of the loveliest ivory white flowers, and best lasting of all. Minnie Hume, though not considered a pot plant, I find most satisfactory; it flowers freely, is delicately fragrant, and superior to many much more costly kinds. Gaily golden and long lasting are little Jonquilla and Odorus Campernella. Among bunch-flowered Narcissi I find Gloriosus the most sweetly scented. It reminds me of Gorse. I grow it singly in tiny pots, bringing one at a time to the flower table, otherwise its perfume is almost overpowering if many spikes are open at once. It is not so showy as Ideal, which lasts excellently. Of double

Daffodils I recommend Argent and Butterfly, both delightful pot plants, growing gracefully and lasting longer than Butter and Eggs or the beautiful Codlins and Cream, which are, alas, a fleeting joy! I find flower shows, though very delightful, do not tell us the things we want to know about the flowers. One has to grow them and blow them, and many are the disappointments! My plan is each year to get about twenty single bulbs of kinds unknown to me and try them. This gives me much interest and amusement at small expense. So far I find, to my satisfaction, that expensive kinds are not always the best—a most comforting discovery to such a poor person as—ANNE AMATEUR.

Lime in the Garden.—Lime, when used with discretion, has proved very beneficial on land of various consistencies. This, I think, is a generally recognised fact. Although I have never used lime at the rate mentioned by "J. D.," page 143, viz., 1½ st. in a drill 9 yards long, I have used it at about half this quantity, with very satisfactory results, for Potatoes. I can quite understand the good results following the use of lime on sour peaty soil at the rate mentioned above, but should hesitate to recommend it for all soils and situations. It would prove instructive if "J. D." would give particulars regarding the nature of his soil. Respecting "J. D.'s" query as to lime as a dressing for lawns, a sour, mossy lawn may be much improved by an application of 5 cwt. of ground lime per acre. A month later Peruvian Guano at the rate of 3 cwt. per acre would assist the grass to form a thick growth.—COLIN RUSE.

Pinks from Seed.—A few years ago I filled a large border with plants of *Dianthus Heddewigii*. The plants were so satisfactory that I have always favoured them since. They were raised from seeds sown in gentle heat in the spring of the same year in which they flowered. About ninety per cent. of the blooms were double, the variety of colours wide, embracing some of the richest dark crimsons, and many were pure white. Seeds should be sown in boxes now, and the latter placed in a warm frame or on a greenhouse shelf. When the seedlings are large enough to transplant, they must be transferred to a sandy bed, or in such compost in boxes in a cold frame. Allow a space of 2 inches between the seedlings. From the frame the young plants must be shifted to their flowering quarters and be put out a foot apart each way. In the meantime get the soil in the bed deeply dug and well manured, and then the plants will not only grow freely, but continue to flower until the middle of November.—B.

Perpetual-Flowering Carnations for Bedding. Apparently Mr. E. Harriss, whose note on this subject appears in a recent issue, has been chary of testing many varieties of this type in the open. In a recently published election the fact was disclosed that no fewer than eighty-nine varieties have been proved to do well out of doors. *Britannia* is unquestionably the finest of all for the purpose, but one may safely plant all except the very large varieties. Some sorts, of course, are apt to take rust when grown in the open, and for this reason *Carola*, for one, should not be used outdoors. I have had grand flowers of the *Enchantress* group, *Baroness de Brien*, *May Day*, *Canary Bird*, *Wivelsfield Wonder* and *White Wonder*; but the large, full flowers are apt to suffer if we get a wet season like the last one. Border varieties, however, often fail to open in bad weather unless protected, and if one has to ward off wet from border varieties, one can also do the same with Perpetuals, and be sure of getting more flowers. I am inclined to think that many will adopt the policy of growing Perpetuals under pit-lights during the summer months. Supported on light framework, with the sides fully open, one could use the idle pit-lights to advantage. Protected from rains in this way, there is no reason why amateurs should not get flowers fit for showing during the summer; indeed, one amateur to my knowledge won a first prize last summer with a dozen blooms, several of which were cut from the open. *Royal Purple*, he informed me, is very fine for the open ground. A gardener near me has for several seasons planted out his

old stock plants, and he cuts flowers by the armful.—T. A. W.

***Narcissus triandrus albus*.**—When well established this is one of the most exquisite little bulbous plants obtainable. It appears to greatly resent disturbance, especially if this is accompanied by a drying off of the bulbs in the orthodox style. Three years ago I planted a dozen bulbs in a pocket of my rockery in very gritty loam, and they have now established themselves in a most satisfactory manner. The first season they produced the usual rather weakly stems with one or two flowers on each; last year two bulbs threw up stout stems bearing five fine flowers each, and one produced a six-flowered truss. As I allowed them all to seed—some fertilised by their own pollen, others by Mme. de Graaff—I feared this would weaken the bulbs for this season. On the contrary, they are finer than before, and I have just counted trusses of four flowers on two plants, of five flowers on five plants, six on one and eight on another. The individual flowers are very large, but have not quite the substance of *N. t. calathinus*. My bulbs have received no special care. The surface of the soil is covered with a thin layer of gravel, but I have not risked planting any dwarf plant above them. They face south-east, so get well ripened in the summer. I believe this is generally considered rather a weakly species and difficult to establish, so I hope this note will induce others to give it a trial. I should much like to know the greatest number of flowers that *N. t. albus* has been known to bear on a single stem.—NORMAN G. HADDEN, *Malvern*.

About Apple Blossoms.—Scarcely anyone, I think, would contest the assertion that one of the most beautiful pictures of natural beauty in early spring is the Apple tree laden with its chaste and pleasantly fragrant bicolored flowers. But not every admirer of the picture has noticed that there are three or four distinct shades of the two predominating colours, pink and white; hence this brief note of impressions respecting a few well-known varieties. Potts' Seedling, salmon pink; Lord Suffield, deep pink, one of the most striking; Worcester Pearmain, pale salmon, quite distinct, no other variety being quite like it so far as I have noticed; King of the Pippins, pale pink; Beauty of Kent, an average pink and white; Warner's King, rosy pink; and Cellini Pippin, inclined to salmon. These sorts afford the most striking contrasts out of the varieties I have been able to watch, and the colour tints noted apply to the early life of the flowers only, for after a certain stage they have a tendency, like all flowers, to lose their pristine beauty. Here and there one comes across a pure white petal among the clusters, as if it were an oversight on Nature's part, for assuredly it is the exception and not the rule. In Warner's King I have seen more white petals than in any other sort. But the one fact out of this study which seems of unusual interest is this: Apple Lord Suffield when ripe is a strawy yellow shade, but it produces one of the brightest of flowers; while Worcester Pearmain is a brilliant red fruit that has been preceded by a pale salmon flower. Of course, flowers vary in shade somewhat, grown in different soils, just as do the fruit.—C. TURNER.

FORTHCOMING EVENTS.

May 11.—United Horticultural Benefit and Provident Society's Committee Meeting.

May 14.—Manchester and North of England Orchid Society's Annual Meeting. Brighton, Hove and Sussex Horticultural Society's Meeting.

ORNAMENTAL FLOWERED CHERRIES.

ALMOST throughout the *Prunus* family the various species are famous for their floral beauty, and as each one opens its blossoms it adds a distinct charm to the garden. Fortunately, many of the best kinds blossom in succession, therefore a continuation of beautiful effects is obtained from early March until late May. In March the Almonds attract attention; about the end of the same month the Myrobalan or Cherry Plum is a cloud of white blossom; April sees the double-flowered Peaches covered with red, pink or white flowers; during the latter half of the same month the Cherries commence to bloom, and before their beauty is gone the blossoms of the Bird Cherries expand.

The Cherries form a distinct group of the genus *Prunus*, and are sometimes known by the generic name of *Cerasus*, a name which is used by botanists to distinguish the well-marked Cherry group of the Plum family.

Prunus Avium is its best-known example, for it occurs wild in woods in some parts of the British Isles, where it is known by the common names of Gean and Mazzard. It is the parent of many of the cultivated Cherries, and in a wild state averages 40 feet to 50 feet in height, with a trunk 1 foot to 1½ feet in diameter. Much larger trees are known, however, for on the Cobham Hall Estate in Kent there are specimens over ninety feet high. On woodland trees peculiar, stiff, besom-like growths sometimes occur, the stems below them being enlarged by curious gouty swellings. Such growths are familiarly known as Mare's Tails, and are said to be caused by irritation brought about by the presence of a fungus (*Exoascus cerasi*). As a decorative garden plant the form with double flowers, known under the varietal name of *flore pleno*, is the best, and when every branch is laden with pure white, pendent blossoms it creates a most charming picture. Fortunately, it is amenable to general cultivation, and there are few places where it may not be expected to thrive. In course of time it forms a large tree, although it blossoms freely from the time when it is but a few feet high. There are other distinct varieties, of which *pendula*, with weeping branches and single white flowers, is very distinct. *Decumana*, which has very large leaves, is also a distinct and showy form, but the remaining varieties are no improvement on the wild tree.

P. acida is a small European tree with a dense head of branches. The white flowers appear with great freedom during early May. There are many varieties, several of which are well adapted for quite small gardens, for they never form large trees and are of compact growth, blossoming freely from the time when they are but 1 foot or 2 feet high. *Dumosa*, *humilis*, *Marasca* and *umbraculifera* are representatives of these varieties. The variety *semperflorens* is very different from the other forms. Of taller and looser habit, its branchlets are of a semi-pendent character, while the white flowers are borne in loose racemes in May and again in the summer. It is called the All Saints' Cherry, and it is an interesting and showy subject.

P. Cerasus is the dwarf Cherry or Morello Cherry, a European species which is also found wild in the British Isles. It is a free-flowering tree of smaller growth than the common Cherry. It

also has a double-flowered variety which is known as *Rhexii flore pleno*. Although a very showy tree, it lacks the grace of *P. Avium flore pleno*.

P. japonica is better known by its double-flowered varieties *flore albo pleno* and *flore roseo pleno* than by the type. The typical plant is of comparatively recent introduction, for seeds were sent from China to Messrs. Veitch early in the present century. The double-flowered kinds have, however, been known for many years, and the one with white flowers has been used for a long period both for beds and for forcing. Those with double flowers are still the most useful garden plants, although both the white and red forms

between the two species and their respective varieties, which have been cultivated and improved for a long period by Japanese and Chinese gardeners. Both are apt to form low trunks clothed with long, gaunt branches, which, instead of being furnished with long, slender branchlets, are thickly beset with short, stiff, spur-like growths, which are so prolific of flower-buds that each branch forms an inflorescence in itself, being clothed with flowers from end to end during April or May. Many of the varieties have double flowers, which are up to 2 inches across, and may be white, pink, rose or yellowish in colour. The chief difference between the two species is said

ROSE-GROWING IN POTS IN CONGESTED DISTRICTS.

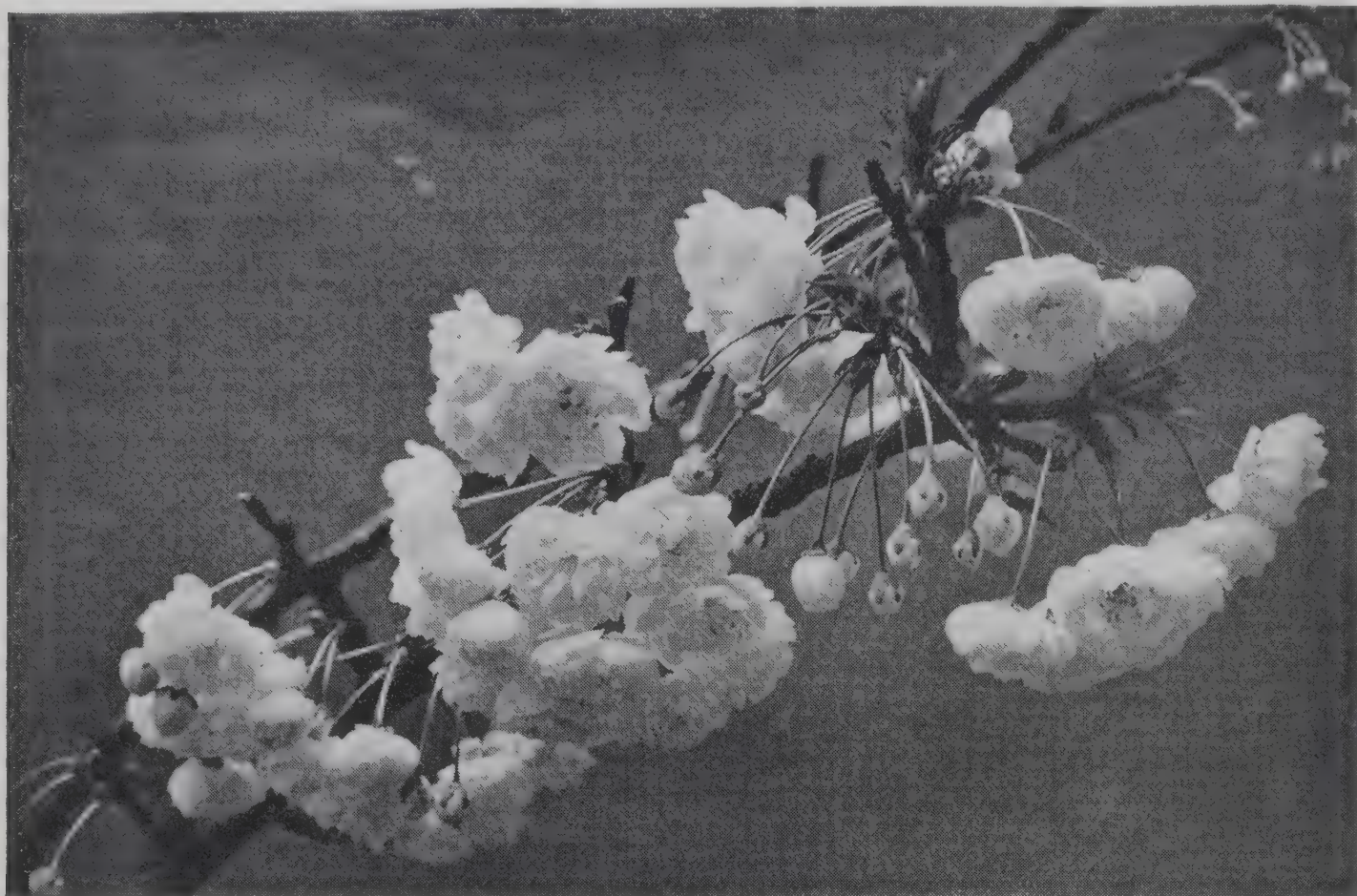
THE writer has generally found that where difficulties abound in the cultivation of the Rose the more ardent the enthusiast becomes, and the well-known incident related by Dean Hole in his very racy Rose book of the mechanic who robbed his bed in order to keep the frost from the Roses may well be accepted as an example of this enthusiasm among the artisan class in our mining districts.

The object of this article is to give a few hints to readers who are compelled to reside in smoky or manufacturing districts and who desire to grow a few good Roses. To attempt this in the natural soil seems hopeless. How, then, can one proceed? I suggest growing the plants in pots in a cold frame covered by glass lights, or in an unheated greenhouse. Now there are individuals who expect the impossible. They are not content with having the well-known established favourites, but they cast their eyes longingly to the newer sorts, and if they fail they blame the nurseryman. Such individuals, moreover, are not content with obtaining good blooms, but they want to produce flowers equal to silver medal blooms as seen at the National Rose Society's shows. I would advise such enthusiasts to go in for the well-known established sorts and grow them well, and I can promise them unlimited enjoyment in so doing.

It should be clearly understood that a Rose plant cannot endure being prematurely forced into growth until its roots have become well established in the pot. It is in this that many failures occur. Amateurs purchase Roses from the open ground and pot them up in October,

and they expect such plants to be fit to put into the forcing-house in December and to be in bloom in March. This would be quite contrary to the usual procedure or to the nature of the Rose plant. If any reader desires to grow pot Roses in heated structures, I would advise him to purchase plants that are already established in their pots, or else to pot some open ground plants himself and grow such plants in the open and in a cold frame in winter, or to keep them entirely in the open garden for one summer and autumn following their potting up. This advice was given to a gentleman in Lancashire a season or two ago, and he writes to say he is delighted with the result.

Supposing this system be adopted, the plants should be pruned back to a foot at the time of potting, and their roots trimmed back if very long. Use a good compost consisting of turfy loam two parts, well-decayed manure one part, and a 6-inch potful of bone-flour to two bushels of compost, all well mixed together. Eight-inch pots are the best size to use. When potted, give the plants a good watering and then stand them in the open, the pots plunged in ashes up to their rim. Leave the plants here all the winter, covering them with mats, arranged over a wooden frame,



FLOWERING SPRAY OF PRUNUS CERASUS RHEXII FLORE PLENO, A BEAUTIFUL DOUBLE-FLOWED CHERRY.

with single flowers produce red fruits during the summer. Growing from 3 feet to 4 feet high, the double-flowered kinds are improved by a vigorous pruning every second or third year, for by that means strong young shoots are encouraged which produce the maximum number of flowers. Layered branches form the most rapid means of increase. This species is found in China and Japan.

P. pendula, the Rose-bud Cherry of Japan, is a very beautiful tree when at its best, for during early April its long, slender, pendent branches are wreathed with pretty rose-tinted flowers, which in the bud stage are a very bright shade of rose. It is one of the few pendent-habited trees which reproduce themselves from seeds. It is, however, often grafted or budded upon stems 6 feet or 8 feet high. Unfortunately, it commences to grow very early in the spring, and flowers and young shoots are sometimes injured by inclement weather. It has been given a variety of names, two which are sometimes used in gardens being *Cerasus japonica rosea* and *C. pendula rosea*.

P. Pseudo-cerasus.—This is a Chinese and Japanese species of very decorative appearance. It is closely related to *P. serrulata* from the same countries, and a good deal of confusion exists

to be in the fact of *P. Pseudo-cerasus* having hairy leaves and *P. serrulata* glabrous leaves. The variety known as *Watereri* is included with the former species, and *flore luteo pleno*, *flore albo pleno*, James H. Veitch and others with *P. serrulata*.

P. Sargentii is closely allied to *P. serrulata*, but it has fewer flowered clusters of bloom and more coarsely serrated leaves. Originally raised in the Arnold Arboretum from seeds received from Dr. Bigelow, a further supply of seeds was received two years later in the same garden from Professor Sargent, who collected them in Japan, where it grows 80 feet high, but it only appears as if it will form a small tree here. The elliptic or oblong leaves are up to 3½ inches long, and the rose-coloured flowers are about 1½ inches across and produced from two to four together in small clusters.

P. subhirtella.—This is a very beautiful early flowering Cherry, which is usually at its best during the first half of April. It forms a round-headed tree at least 18 feet or 20 feet high, and bears delicate rose coloured flowers, each about three-quarters of an inch across, in profusion. Except that it is of upright habit, it very closely resembles *P. pendula*, the leaves and flowers being practically the same. It can be raised from cuttings, and grows fairly rapidly into a shapely tree. D.

if the winter is very severe, or the plants may be removed to a cold pit having just a glass light covering. The plants are pruned at the end of March if kept outdoors, or if in a frame, then in February. It is advisable to prune well back to within 5 inches or 6 inches of the base of the plants. If no cold pits are used, keep the plants where they are outdoors until May, when they should be placed more thinly in the beds, so that all new growths may receive abundant air and light.

It will be seen that we have overcome one difficulty in growing Roses in uncongenial districts, and that is as regards the soil. We have now to try to make them grow in the vitiated air, and to do this they must have daily cleansing of the foliage. Where only a dozen or two are grown, it would be a small matter to sponge the foliage every evening with some Jeyes' Horticultural Wash, well diluted. The plants will need to be looked over every morning to see that they are not suffering for want of water. It is a common error to water every plant that looks dry on the surface. This is a mistake. The safest plan is to tap the side of the pots with the knuckles or a wooden hammer, and if it gives forth a bell-like sound, then apply water in good quantity. As the plants develop and show buds, weak liquid manure should be given, and also again after the flowers have finished their summer crop. If the shoots are tied out symmetrically to small sticks, the plants may be formed into a more perfect shape. If well looked after, there should be a good display in the summer, and again in September; then the plants will be ready for putting into the forcing-house for the next winter. But there may be some readers who cannot boast of much garden, but can only manage a small frame. To such I would say obtain plants in October and pot up as previously directed; then place the Roses in the frame, leaving the glass light off until February unless severe weather sets in. The plants should be plunged in ashes up to the rim of the pot. Very little water will be required during the winter beyond the first good watering after potting, and, of course, the plants would obtain such rain as falls, unless the latter is too much, in which case the light may be put over the plants and well tilted at the back or side to admit air night and day. If possible, allow the frame to slope to the south, and see that it is in the sunniest spot available.

Prune the plants in February to within 4 inches to 6 inches of the top of the pot, and after this great care will be needed in order that the plants do not become frozen. If the weather is at all sharp, keep the light closed down and protect with mats or sacks stuffed with hay. A frame 6 feet wide by 4 feet long and 3 feet deep at the back will hold about twelve plants in 7-inch or 8-inch pots. Such a frame can be made of stout wood, or, if preferred, bricks may be used. I have even seen turf used to make the walls, with a narrow board lying on the top of the turf walls to support the glass light. Any handy-man could make such a frame, and certainly he could glaze the light himself. In a frame of this

kind the plants will break into growth very slowly, but this is all the better for them. When the longer days of April arrive, growth will be more rapid, and, of course, more water will be needed. Do not be tempted to apply all sorts of artificial manures. The plants require none of these. One teaspoonful of guano to a gallon of water may be given when the tiny flower-buds are seen, and it may be repeated once a week until colour shows in the buds. By this time the plants may need a little more room, for it is essential that the growths be tied out to small sticks in order that every leaf may receive full light, and also to preserve a well-balanced growth. Another small frame would be useful, or, failing this, a makeshift one with wooden sides and canvas top would answer the purpose. Here the forwardest plants could be placed. An important detail to remember is the washing of the glass frequently, and, in order to hasten growth, syringe the plants about three o'clock in the afternoon of a fine day and shut down the light.

After blooming, the growths that have flowered should be cut back to a good plump eye and kept well syringed; of course, they must not be allowed to suffer for the want of water. A little weak liquid manure will be helpful for the second growth, and the syringe should be freely used every sunny morning and afternoon. Give plenty of air now, but, in order to accelerate growth, the glass light may

cow-manure if available, using one-third of this latter to two-thirds loam. A few good varieties to start with would be Caroline Testout, Mrs. John Laing, Frau Karl Druschki, Ulrich Brunner, Captain Christy, Captain Hayward, Lady Ashtown, Betty, Laurent Carle, Mme. Abel Chatenay, Mme. Ravary, Pharisäer, Prince de Bulgarie, Mme. Leon Pain, Lieutenant Chaure, Countess of Shaftesbury, Lady Pirrie, Sunburst, Richmond, Liberty, Ophelia, Mme. Jules Grolez and Mrs. Aaron Ward.

DANECROFT.

FOTHERGILLA MAJOR.

THOUGH this attractive North American shrub is figured in the *Botanical Magazine*, t. 1342, published in 1811, it must have disappeared from gardens soon after that date. For its reintroduction we are indebted to Professor Sargent, who sent it to Kew in 1902, plants having been found on the Alleghany Mountains. The Fothergillas belong to the Hamamelidaceæ, and are allied to the Parrotias and Hamamelis. There is another species cultivated in gardens, *F. Gardenii*, which name is synonymous with *F. alnifolia*. Both species flower during April and May; but in point of beauty the last named cannot be compared with the subject of the illustration. When first introduced it was named *F. alnifolia* var. *major*, and



FLOWERING SPRAY OF FOTHERGILLA MAJOR, A RARE HARDY SHRUB NOW BLOOMING AT KEW.

still be kept on, tilted, of course, during the day-time. It is a good plan to take each plant out once a week, lay it on its side and give it a good spraying, so that no insect foes lurk beneath the foliage. Green fly will show itself, and I know of no simpler remedy than Auto Shreds. They are simply set light to, and cause no trouble whatever. If the reader possesses a greenhouse and desires to plant Roses therein, he could not do better than plant out such pot Roses as I have described, or, if preferred, he can purchase established plants. The soil that will be used for the Roses in the planted-out greenhouse should be good loam—and it will pay anyone to import a cartload or two of good material—with some

was known as the Broad-leaved Fothergilla. The Fothergillas have no petals, the showy inflorescences being due to the bunches of creamy-white filaments. These appear in advance of the leaves, which are roundish oval, up to inches long. In autumn, as the leaves die off they assume a rich, clear yellow, lasting, as a rule, in beauty for several weeks. A plant growing at Kew is already about 4 feet in height. In the Arnold Arboretum there is a beautiful specimen 8 feet high. Six to a dozen plants make a very attractive bed or group along the front of a border of choice shrubs. Fothergillas thrive in a compost of sandy loam, peat and leaf-mould. Layering and cuttings form ready means of increase

A. O.

SOME BEAUTIFUL POPPY-WORTS.

THE MECONOPSES.

(Continued from page 216.)

Cultivation.—A point of high importance here is that for all practical purposes the plants are moisture-loving, preferring peat, leaf-mould and loam in about equal parts, while not objecting to rich, light loams alone. Equally important, for some species at least, and those of nobler growth more particularly, is the question of soil richness; hence too great a proportion of peat should not be employed, or, if for any reason employed, it must be liberally enriched. In this connection no words of mine could possibly possess half the weight or importance of those which, in response to questionings as to the exact conditions under which he found the unique *M. integrifolia*, came from the lips of Mr. E. H. Wilson. In the first place, he said the whole of the cultivated examples he had seen since his return had been extremely disappointing, giving the impression of starvelings rather than that of well-grown specimens. In its high mountain home, he further remarked, the ground is traversed by vast numbers of yak, a species of ox, which are responsible for the heavy manuring of the ground. To these conditions Mr. Wilson attached the great vigour of the plants, the richer colouring of the flowers, and the greater freedom of production; hence it would be well for gardeners generally to cultivate the plant on these lines. Mr. Wilson was also emphatic as to the hardiness of this fine species, and imagined that the feeble results he had seen were, partly, the evidences of fear on the part of the cultivator rather than those of indifferent treatment or neglect.

We know to-day that not a few of the more robust-growing species not only delight in rich soils, but that the cooling effects of cow-manure have a decided influence for good in the maintenance of a steady, continuous growth. How great a part altitude and the rarefied conditions of high mountain air play in the cultivation of these plants must ever remain a mystery. Even if solved, the information, because of the impossibility of imitation, would be quite useless to the gardener. The task before the latter is that of adapting these children of the mountains to the conditions prevailing in lowland countries, and in so doing he will find the school of experience—observation and experiment—of the greatest possible service.

Though the fact that the major portion of the species comprising the genus are virtually only of biennial duration is well known, it is worth repeating, if not, indeed, emphasising. Biennial plants of all classes, if they are to produce at flowering-time the best they are capable of giving,

must be so raised from seeds and subsequently planted in their permanent quarters as to render possible the fullest development of the plant in the first year. Failing this a meagre development results, and all else—size, colour, free and profuse flowering—follows in due proportion. Of no group is this more true than of these biennial Poppyworts. In other words, a spring sowing of the seeds cannot produce the results of an autumn sowing, any more than July planting can equal that of April or May.

Seeds and Seedlings.—Seeds are not always produced abundantly or of the highest quality. This is so even in those instances where artificial pollination has been resorted to. Apparently

tion of the earlier opening flowers is resorted to, a moderate supply of seeds will be forthcoming. These may be sown at any time within a month or so of harvesting, and, if of good quality, will vegetate in about three weeks thereafter. Well-drained pans of light, sandy loam or sandy peat will do quite well for the seed-sowing, and the seeds, covered with soil of the thickness of half-a-crown, will be quite safe in the temperature named. A cultural item of importance is that the soil of the seed-pan be well soaked with water in advance, so as to reduce to a minimum any further need for water till the seedlings appear. This latter may be expedited by covering the seed-pans with sheets of glass, and again with moss, to conserve moisture and the uniform conditions of soil warmth. Subsequent treatment resolves itself into pricking off and potting singly as occasion demands, and in maintaining a sturdy, uninterrupted growth by further shifts till the arrival of April, when the plants should be ready for their permanent places in the garden. E. H. JENKINS.

(To be continued.)



IRIS FLAVESCENS, A BEAUTIFUL MAY-FLOWERING HYBRID WITH YELLOW BLOSSOMS.

A CHARMING MAY-FLOWERING IRIS.

IRIS FLAVESCENS.

THIS attractive May-flowering Iris is worthy of extended cultivation. For some unknown reason it is very much neglected, and is, like the German Iris, more often than not relegated to an out-of-the-way corner in the garden, where it is allowed to dwindle and die. *Iris flavescens* is a good border plant; the flowers are yellow, and the plant attains a height of 2 feet to 3 feet. For a long time it has been looked upon as a synonym of *I. imbricata*, but Mr. W. R. Dykes, in his thoroughly reliable book, "The Genus Iris," says "the frequently repeated statement that *I. flavescens* is a native of the Caucasus is due to its erroneous identification with *I. imbricata* (Lindl.). It is doubtless a garden hybrid and has no real claim to specific rank." Whatever may be its origin, *I. flavescens* is a beautiful Iris of the easiest possible culture. Two conditions are essential to its welfare, *i.e.*, sun and a well-drained soil. It will thrive in both heavy and light soils; but if the soil is very sandy, a top-dressing of short, well-rotted manure and leaf-soil will prove beneficial. When transplanting is necessary, it should be done soon after flowering.

NEPETA MUSSINH.

It is a good plan to plant this lovely perennial in a border of Roses. It serves to cover up bare stems, and will be found to associate well with almost any colour. Last season we saw this combination on a large scale, and we shall not readily forget the effect. It should be planted without delay.

large quantities of good seeds are produced, the thin crop of resulting seedlings demonstrating either the infertility of the majority or some cultural error in raising them. In this connection I am of opinion that cold-frame treatment may, to some extent, be responsible, the seeds perishing in the soil, and that a quicker germinating, the outcome of sowing in slight warmth, say, a temperature of 45°, would be more productive of good results. In the case of *M. integrifolia* and *M. Wallichii* this is undoubtedly true, and there may be others. The only way to ensure a good crop of seeds is by artificial pollination, and, even so, much depends upon the season and not a little upon the fecundity of the pollen. Usually, however, where pollina-

COLOURED PLATE.

PLATE 1493.

FOUR GOOD ANTIRRHINUMS.

MOST of our readers will remember that last year the Royal Horticultural Society held a trial of Antirrhinums in the famous gardens at Wisley. There a great many varieties were grown side by side for comparison, and when judged a number were granted awards of merit. Four of the varieties thus honoured are shown in the accompanying coloured plate, which, owing to the wide range of colours, does not quite adequately portray the vivid hues of the flowers. Coccinea was sent to the trials by two firms, viz., Messrs. Dobbie and Co. and Messrs. Dickson and Robinson. It is a beautiful variety, and creates quite a brilliant effect in the garden. Rosy Morn was also sent by Messrs. Dickson and Robinson and by Messrs. Watkins and Simpson. It is a beautiful shade of pink, and the plant has a nice sturdy habit. Golden Queen was sent by three firms, viz., Messrs. R. H. Bath, Limited, Messrs. Dickson and Robinson, and Mr. W. H. Simpson. It has large flowers that are well placed on stout, erect stems. Maize Queen, the fourth variety, is officially described as maize yellow. This also was sent to the trials from three sources, viz., Messrs. Dobbie and Co., Messrs. J. H. Veitch and Sons, Limited, and Mr. W. H. Simpson.

The cultivation of Antirrhinums was fully dealt with by Mr. R. P. Brotherston in the issue for March 14 last, so that it is not necessary to describe it in detail here. They are not difficult plants to grow, and, although it is too late to sow seeds now to provide plants to flower this year, sturdy seedlings can be purchased from many nurserymen and plant growers. These are usually ready for moving about the third week in May. Seed may be sown outdoors during June to provide plants for flowering early next year, and where it is desired to naturalise Antirrhinums in old walls or rockwork, that is undoubtedly the best course to pursue. For beds and borders, however, early spring sowing in frame or greenhouse usually gives the best results. With the many beautiful colours that we are now getting in modern varieties, it will not be surprising if, in a few years' time, they become almost as popular as the Sweet Pea.

SOWING WALLFLOWERS.

SEEDS of these indispensable flowers should be sown at once in order to obtain good strong plants for the flower garden in October. Sow the seeds in shallow drills a foot apart, and transplant the seedlings as soon as large enough to handle. Other seeds for spring bedding should also be sown now, and these may include Myosotis, Pansy, Polyanthus, Silene, Aubrietia, and double Daisy New Giant Rose and White.

RHODODENDRON ROSY BELL.

ALTHOUGH Rhododendron Rosy Bell is by no means new, yet it is only within the last year or two that its merits have been appreciated. As an early variety for Southern gardens it is coming rapidly to the fore. The parents of this attractive hybrid are two Sikkim species, *R. ciliatum* and *R. glaucum*. For outdoor decoration it is a most useful plant, but, as may be imagined from its parentage, not very hardy. Except in the favoured South and West, a position sheltered from the morning sun should be selected when planting, so that if there is a little frost it will gradually thaw before the sun's rays reach the plants. The flowering season is the second half of April. The plant is evergreen; the blooms are bell-shaped, about an inch long and the same in width.



A GROUP OF THE BEAUTIFUL RHODODENDRON ROSY BELL.

They are borne in small, rather loose trusses, terminating practically every twiggy growth. These usually consist of about five flowers, while sometimes there are two or three trusses together terminating a growth, which to all intents and purposes might be one large truss of flowers. The colour is a delicate pink with a suspicion of mauve.

As can be readily seen in the accompanying illustration, Rosy Bell is a dwarf bushy plant and very free flowering. With age the plants gradually increase in size, the tall plant in flower at the back of the group being also Rosy Bell. It is quite a good plant for the rock garden as well as for the border, while those who have only a bleak garden will find Rosy Bell a useful Rhododendron for pot cultivation. Cuttings root readily in sandy peat under a bell-glass, and in a propagating-frame with slight bottom-heat.

DAFFODIL NOTES.

NEW DAFFODILS AT THE ROYAL HORTICULTURAL SOCIETY'S 1914 SHOW.

IN dealing with novelties I need only say by way of introduction that there were only a very few which I might describe as altogether "out of the way." The double Llinos marked a new type of double of a symmetrical and pleasing shape, and was the most talked about flower in the hall. A magnificent Lucifer, shown by Mr. A. M. Wilson under a number, is as large as any, if it is not the largest flower, with a long all-red cup and white perianth. Before dealing with the different items in detail, I think I ought to explain the meaning of my measurements. It will have been noticed that I usually use such a formula as $3\frac{1}{2}$ inches \times $1\frac{1}{8}$ inches

or 4 inches \times (1 inch \times $1\frac{1}{8}$ inches) \times ($1\frac{1}{8}$ inches \times $2\frac{1}{8}$ inches). In both cases the first number is the diameter of the perianth. Where only a single measurement follows, that one is the diameter of the eye or cup. The inference to be drawn is that the flower is a Poet or a very shallow cupped variety of some Barrii or Leedsii. Where two measurements follow, the first is that of the exterior segments of the perianth (the first that of their greatest width and the second that of their length from the base of the corona or trumpet to the tip) and the last one that of the trumpet or cup (the first being the length and the second the diameter of the top, including the recurve of the brim). I hope this short explanation is clear, for, as the late Mr. Sydenham used to say, these details enable us to construct the flower in our mind's eye.

Llinos, a new type of double raised and shown by Mr. Watts of St. Asaph. This was the first bloom on the plant, so there is just a little doubt

if it will come the same again, although the raiser has every hope that it will. The flower has a diameter of 4 inches, with two regularly placed rows of perianth segments on the outside, with parts of the split-up corona symmetrically arranged between them. The centre of the whole is a jumble up of longer and shorter bits of either petals or corona, two or three of the pale shaded ones being especially prominent. Perianth primrose; the petals of the inner row have a yellow stripe down their centre. Corona pale orange.

Lord Lister (Welchman), an exquisite white Ajax, which I remember was exhibited at Birmingham last year. As the measurements indicate, it is a flower with a trumpet on the short side, the recurve of which is a little like that of Mme. de Graaff. The perianth segments are smooth and overlapping, with just the slightest inclination to come forward. It was certainly one of the best flowers at the show. Size: $4\frac{1}{8}$ inches \times ($1\frac{1}{2}$ inches \times $1\frac{5}{8}$ inches) \times ($1\frac{1}{2}$ inches \times $1\frac{7}{8}$ inches).

Martel (Cranfield), a giant incomparabilis of perfect symmetry and form, the whole flower of a rich yellow, with the cup or small trumpet of a deeper shade. The perianth is perfectly flat, and is set at right angles to the corona. The segments are wide and overlapping. It is a true florist's flower, and stands to the usual giant incomparables much as Florist's Favourite, which I described in the issue of April 25. and of which an illustration is given on this page, does to an ordinary trumpet, such as Golden Spur or Emperor. Measurements: 4 inches \times ($1\frac{3}{8}$ inches \times $1\frac{5}{8}$ inches) \times ($1\frac{3}{8}$ inches \times $1\frac{5}{8}$ inches).

Princess Juliana (Barr), a rich, very deep yellow Ajax, a real self. Its distinguishing feature is the massive, widely scalloped recurve of its somewhat short trumpet. It is a flower that one is bound to notice in any collection—perhaps this is why it is called after the little girl Princess of Holland—otherwise I would have thought its sturdiness would rather have suggested a William the Silent or a Barneveldt. It received an award for show from the Narcissus committee. Measurements: $4\frac{1}{4}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{3}{4}$ inches) \times ($1\frac{1}{2}$ inches \times $2\frac{1}{8}$ inches). N.B.—When the diameter of the trumpet (here $2\frac{1}{8}$ inches) is very much in excess of that of its length (here $1\frac{1}{2}$ inches), it usually denotes a wide recurve of the brim.

Morven is a pale bicolor Ajax which was raised at Forres Castle by Brodie of Brodie. It was brought before the committee by Messrs. Cartwright and Goodwin, and received an award for show purposes. It is a very cool, clean-looking flower, and has a decided resemblance to J. B. M. Camm in its general appearance, but with a longer trumpet. Size: $3\frac{3}{4}$ inches \times ($1\frac{1}{4}$ inches \times $1\frac{1}{2}$ inches) \times ($1\frac{5}{8}$ inches \times $1\frac{1}{2}$ inches).

Sigismund (Barr) resembles a beautiful Giant Leedsii, with very broad, overlapping segments of great substance, the whole flower being of a delicate greenish white. Size: $3\frac{1}{2}$ inches \times ($1\frac{1}{2}$ inches \times $1\frac{3}{8}$ inches) \times ($1\frac{1}{8}$ inches \times $1\frac{1}{8}$ inches).

White City (W. T. Ware) is a striking Leedsii of the White Lady type, raised by Mrs. Backhouse. The perianth, which is of a beautiful white shade, is inclined to come forward and the extreme edges of the petals to incurve. Massed as Mr. Ware had it in great market bunches, "it was

fine." Size: $3\frac{1}{2}$ inches \times seven-eighths of an inch. It is a very thick flower.

Ivory King (Bourne) must have been, I fancy, a new purchase, for its name does not occur in the 1914 list. Anyhow, Mr. Bourne annexed a great beauty when he bought Ivory King. It is away from the usual shades of large Ajaxes, inasmuch as it is a rich ivory white self. The perianth is slightly hooded, and the trumpet wide and boldly expanded at the brim, the whole bloom being of much substance. Measurements: $4\frac{1}{2}$ inches \times ($1\frac{5}{8}$ inches \times $1\frac{3}{4}$ inches) \times ($1\frac{3}{4}$ inches \times $1\frac{7}{8}$ inches).

Coral Queen (Barr) is a white-petalled Barrii. The segments are rather "rough" and uneven, but not so much as to prevent it being a beautiful flower for vase decoration. The broad band of



THE NEW DAFFODIL FLORIST'S FAVOURITE. THE RICH, DEEP YELLOW FLOWERS ARE OF PERFECT FORM.

rosy buff which circles the flat eye is most uncommon, and will well repay any little extra trouble that an early gathering and afterwards keeping of the blooms would occasion. It is no use disguising or minimising the fact that these delicate and fugitive colours need special care if we are to enjoy them, and that treated as an ordinary garden plant, like an Emperor, they are never seen. Size: 3 inches \times seven-eighths of an inch.

Golden Apricot (Barr) is another example of a flower with unique colouring in its cup, which, as the name implies, is a golden apricot with an edge of buff; at least, that is the best Mr. Rudolph Barr and myself could do as we stood before it and discussed its shade. The cup is large in proportion to the whole. The perianth is rough and of much substance. Size: $3\frac{1}{2}$ inches \times (1 inch

\times $1\frac{3}{8}$ inches). The numbers in parentheses belong to the cup.

Mogador (Engleheart) is an exquisite example of a star-shaped Giant Leedsii of great refinement. It features in many respects White Pennant (R. H. Bath), but the cup is much more like a diminutive trumpet. As White Pennant was in the hall, I was able to compare the two varieties together, and as a result I fell a victim, and the next time it blooms some of the bulbs will find themselves in New Zealand and some at White-well. I call it Mogador, the lovely white city on the seashore of the Atlantic as seen from the surrounding sand hills, the southernmost port of Morocco open to foreigners. Size: Diameter of the whole flower, 4 inches. I do not seem to have any record of the cup, but it must have been about $1\frac{1}{2}$ inches \times $1\frac{1}{2}$ inches.

14 R 5 (Engleheart) is a narrow-cupped Leedsii of striking appearance because of the pink edge to its cup. It has a perianth like that of Thora, and a long, rather narrow cup, broadly suffused pink. It is seen to most advantage when the flower is held sideways against the light.

741 (Wilson) is the magnified Lucifer which is previously referred to. Size $4\frac{1}{8}$ inches \times ($1\frac{1}{2}$ inches \times $1\frac{1}{8}$ inches) \times (three-quarters of an inch \times seven-eighths of an inch). In estimating this measurement I ought to say that I think the diameter ($4\frac{1}{8}$ inches) would have probably been a quarter of an inch more if the segments had been stretched to their full length.

Martha (Wilson), a refined small flower of a lovely shade of primrose, both perianth and corona being an exact match of one another in colour, a well-defined edge of red round the cup giving the necessary relief. Size of bloom: $2\frac{3}{8}$ inches \times seven-eighths of an inch.

Yellow Poppy (Cartwright and Goodwin) is a very large incomparabilis, with a wide open, cup-shaped corona in the place of the more usual long-shaped one. The perianth was flat and overlapping, with rounded segments, and pale primrose in colour. The yellow cup was edged with a narrow band of orange. Dimensions: $3\frac{3}{4}$ inches \times ($1\frac{1}{2}$ inches \times $1\frac{1}{2}$ inches) \times (three-eighths of an inch \times one-eighth of an inch).

Various.—I have many more nice flowers described in my notes, such as the most exquisite triandrus hybrid with which Mr. P. D. Williams won the single bloom class; Mont Clair, a grand, very deep yellow Ajax on Messrs. Barr's stand;

the well-grown Harold Finn and the single bloom of White Pennant on Messrs. Bath's; Girdle, one of Mr. Watts' fine Giant Leedsii; Agatha, a pretty pointed white Ajax on Mr. Bourne's; the chaste white trumpet Vestal Virgin on Messrs. J. R. Pearson and Sons', surely one of the most lovely of its type; and a uniquely coloured one also among Messrs. Pearson's, with a primrose perianth and a lemon trumpet, named Sulphur Gem— $3\frac{3}{4}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{1}{2}$ inches) \times ($1\frac{1}{4}$ inches \times $1\frac{1}{4}$ inches)—sold to Holland, that country so greedy for our beauties and so successful in getting them; Mrs. W. O. Wolseley, a very early and refined Giant Leedsii on Messrs. Carter's; and others too numerous to mention, which is just as it should be, seeing that I am writing about the big London show of 1914.

JOSEPH JACOB.

GARDENING FOR BEGINNERS.

HOW TO GROW VEGETABLE MARROWS.

THE Vegetable Marrow is a prolific plant when well treated. It is a fact, however, that the best is rarely obtained from the plants. After the first week in June they grow freely in suitable soil, but perhaps it is owing to the ease with which they can be grown in warm weather that many cultivators pay less attention

to the welfare of the plants than their merits as luscious vegetables warrant. On the other hand, there are cultivators who are over-anxious in the matter, and raise seedlings too early, coddle the young plants, and put them out a few weeks too soon; then they get a serious check, if they are not quite killed. From start to finish Vegetable Marrows require warmth and to be guarded against chills.

Sowing Seeds.—If seeds are sown before the middle of May, the resultant plants will be ready to put out on June 10, a

date quite early enough, as young, robust plants are much more valuable than those stunted through being kept in the pots too long. Sow one seed in a 3-inch pot filled with loam, leaf-soil and sand in equal proportions. No. 1, Fig. A, shows how the seeds must be sown. It is a wise plan to sow them in fairly moist soil; then, if the pots are placed in a warm position, the seeds will germinate without being watered. But it is essential that the soil be kept moist, else germination will be delayed; furthermore, after it has started, the

embryo plant will perish if the soil suddenly becomes very dry at this season. A warm frame is the most suitable structure for the young plants until a fortnight prior to their being put in their summer quarters, and during that fortnight they must be retained in a cold frame, where they can be fully exposed in the daytime and partly so at night. No. 2 shows a plant in a 6-inch pot at a suitable stage for planting out.

Making the Beds.—In the meantime the cultivator must form the beds in readiness for the plants. It is a mistake to select a much-shaded position or one exposed to east winds. An open, sunny quarter is best. It is unwise to build up a high, dry bed of straw and put on it only a few small heaps of common garden soil. A solid heap of soil, weeds and other garden rubbish would be better. The best bed, however, is one similar to Fig. B. It is composed of rotted manure and good loam, with a free admixture of half-rotted leaf-soil, and is about a foot above the general level of the surrounding ground.

Planting and Training.—No. 1, Fig. B, shows the plant; Nos. 2, 2, side shoots; Nos. 3, 3, the side shoots stopped when several fruits have formed on each. The leading shoot need not be stopped at all, but be trained and pegged down on the bed, so as to fill up nicely all surface space without undue crowding. Allow a space of 5 feet from plant to plant.

Fertilising or "Setting" the Fruits.—Like Melons and Cucumbers, Vegetable Marrows bear male (staminate) and female (pistillate) flowers. In Fig. C, No. 1 denotes a male flower; No. 2, a male flower with half of the yellow flower petals removed. No. 3 shows the bared stigma. No. 4 represents the embryo fruit or Marrow, and No. 5 the stigma of the male bloom inserted in the centre. All cultivators of Vegetable Marrows do not go to the trouble of thus setting the fruits, but leave it to bees and other insects. Sometimes full crops are obtained thus; but it is well worth while, especially in dull, cold seasons, to artificially set the fruits. Water when it is needed, and feed liberally after there are a number of Marrows swelling nicely.

G. G.

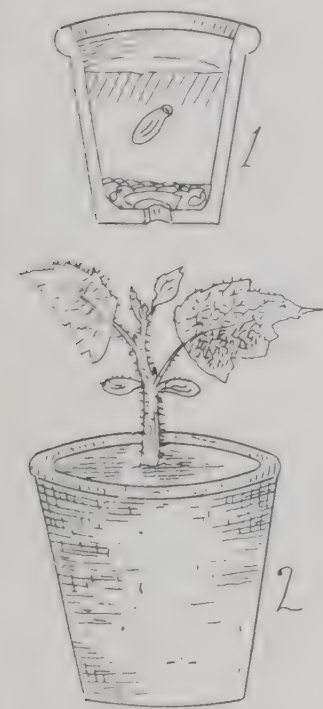
THE HERBACEOUS BORDER IN MAY.

THE herbaceous border is once more alive with new growth in all directions, and with these significant and welcome signs before us arises the thought as to how best we can assist Nature to perform her perfect work. There are just at this time many duties requiring attention, among which is

Mulching.—The recent spell of abnormally warm weather will have perforce turned gardeners' minds to the expediency of mulching, even thus early in the season, and this is certainly advisable, as subsequent results will no doubt prove. For this purpose the manure need not be of the decidedly "old" type, recommended for use when digging in. It should not, however, be laid on in large "cakes," but be first well broken up with the fork, remembering that the object of a mulch is to prevent undue evaporation of moisture round the roots, while at the same time not obstructing air access. In the event of mulching material not being available (manure is not essential; grass

or hedge cuttings answer the purpose), the next best thing is to keep the top soil in a friable condition by frequent use of the Dutch hoe. As a matter of fact, keeping a permanently good surface tilth will always be found extremely beneficial to the plants, and especially during dry weather. In illustration of this point, a friend of the writer's places so much confidence in his Dutch hoe—with justifiable results—that he never uses a watering-can at all! And this garden is always "fair to look upon." We will now consider the question of

Thinning.—The present is an opportune time for reducing the number of shoots on such perennials as Phloxes, Delphiniums, Achilleas, and similar subjects. The weak, and therefore undesirable,



A.—SHOWING SEED SOWN IN POT AND SEEDLING WELL ESTABLISHED.



B.—MARROW PLANTS IN BED, WITH SIDE SHOTS STOPPED AFTER FRUIT IS SET.



C.—DIAGRAM TO ILLUSTRATE HOW TO FERTILISE THE FLOWERS.

shoots need to be removed, and frequently also a few stems from the centre of the plant, in order to allow the remainder room to develop. Next comes the necessary consideration of

Staking.—It is of importance that this duty be commenced early. Bamboo canes are excellent for the purpose. The aim in view should be to keep the plant growing in as natural a position as possible; hence large-sized plants may require several stakes. In tying, say, a plant of Erigeron, it will be found to be worth while not only to surround the whole with the tying material, but also to cross and re-cross it through the plant—this will tend to prevent crooked flower-stems.

B. W. L.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Peach and Nectarine Trees in Late Houses require careful attention with respect to thinning and tying the young shoots. This is a very important matter, especially if the trees are young, for if they are neglected at this stage it is a difficult matter to make good trees of them afterwards. While tying in the young shoots, a space of 4 inches should be allowed between them. Choose the best-placed shoots of medium size, and remove everything which is not required for next season's crop.

Apple and Pear Trees in Pots.—Now that the fruits are swelling, these trees may be given a little more liberal treatment. Syringe twice daily, but never with sufficient force to injure the soft, young foliage. Water with great care, and when necessary give water in sufficient quantity to reach the extremities of the roots. Top-dress the pots with fine loam and a sprinkling of artificial manure.

Plants Under Glass.

Deutzia gracilis.—These plants may be cultivated in pots for a number of years, providing they are carefully pruned and thinned out after flowering. The plants should then be placed in a warm, moist atmosphere until the new growths are fully developed, when they ought to be removed to cooler quarters and gradually hardened and prepared for plunging out of doors.

Fuchsias.—Young plants raised from cuttings should now be ready for their final potting. The compost may consist of turfy loam, leaf-mould and cow-manure, with a good sprinkling of rough sand. Grow the plants in a warm, moist atmosphere, and use the syringe freely. If standards are required, strong, straight plants must be selected and neatly staked. All side shoots should be removed until the plant has reached the necessary height, when the top ought to be removed.

The Flower Garden.

Antirrhinums.—Plants raised from early sown seed will now be ready for planting in their flowering quarters. If distinct colours are desired, it may be necessary to examine the foliage of each plant to make quite certain it is of the proper type. For dwarf varieties a space of 12 inches will be sufficient between the plants, but for tall-growing sorts 18 inches should be allowed.

East Lothian Stocks may be planted out as soon as the plants are of suitable size, allowing a space of 15 inches between the plants. Water freely and make the soil firm about the roots.

Gladioli.—If these have been forwarded in pots, no time should be lost in placing them in their flowering quarters, making the soil as firm as possible about the roots without breaking the ball of soil in which they have been started into growth. As soon as the flower-stems are of sufficient height, secure them to a strong stick.

Shrubs.—Late-planted shrubs should be freely watered during dry weather and the stems syringed late in the afternoon. A mulching of decayed manure may be applied with advantage previous to watering with clear, soft water.

Plants for Summer Bedding.—Pelargoniums, Fuchsias, Heliotropes and all plants intended for summer bedding ought to be removed to cooler quarters and prepared for planting in the flower-beds when the proper time arrives. During the next few weeks it will be necessary to examine the plants several times daily, in order to avoid injury from want of moisture at the roots.

Sweet Peas.—A sowing may be made now for the supply of blooms during August and September. If sown in the open, the soil should be thoroughly prepared before the seeds are placed in the ground; but if pots and space are available, the plants may be raised under glass and planted out when sufficiently advanced.

The Hardy Fruit Garden.

Mulching.—There should be no delay in mulching recently planted fruit trees. This ought to be accomplished before watering. It may be advisable to leave one or two fruits on recently planted trees in order to test the variety, but nothing beyond this should be attempted the first season, or the trees will become stunted, and may be permanently injured in consequence.

Strawberries.—The protection of Strawberry flowers from frost is an important matter, especially in low-lying districts. On early borders it is an easy matter to cover the plants with blinds, which should be available in all gardens where early fruits are expected. In the open garden considerable protection may be afforded by placing a quantity of dry stable litter loosely between the plants; this will protect them from cold wind, and, in the event of frost, may be lightly sprinkled over the foliage. It may eventually be used to mulch the bed and protect the fruits from splashing by heavy rain.

The Kitchen Garden.

French Beans.—Plants in pots from which supplies are being gathered will not require much fire-heat, but should be well supplied with manure-water. Syringe the foliage twice daily, or red spider may prove troublesome. Plants in heated pits ought to be freely ventilated, and the bed should be thoroughly watered whenever necessary. Further plantations may be made in cold pits to afford supplies before they are available from the open garden.

Beetroot.—Early sown Beet in pits should be freely ventilated to keep it from becoming drawn. Allow a space of 6 inches between the plants, and water the bed freely with clear, soft water. Make frequent small sowings of Turnip-rooted Beet from now until the middle of July; these will prove useful during the summer and autumn. The principal sowing of long-rooted Beet may be made now.

Celery.—Continue to prick out young Celery plants on a sheltered border for planting in the trenches in June, and take the earliest opportunity to prepare the trenches so that the plants may be put out as soon as large enough. Water freely with soft, clear water, and damp the plants overhead until they are quite established in the trenches.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Beet.—In most districts it is now quite safe to make the principal sowing, which in many instances is the only one. Sow in drills 1 foot to 15 inches apart and 2 inches deep in ground that has been well manured the previous season. Thin out as soon as the plants can be handled. I do not advise transplanting the thinnings, as, unless in very favourable weather, I have not seen them ever come to much. Where the seed has not come up well, it is much better to sow a little more seed in the blanks. These will come early enough to make nice, serviceable roots.

Turnips.—A larger breadth may now be sown, but avoid doing so in continual dry weather, which would assuredly be a source of disappointment. The better plan is to sow when there is a prospect of rain or immediately after showery weather.

The Flower Garden.

Planting Hollies.—In our Northern climate these may be planted from now till the beginning of June; indeed, I have seen large numbers of fine specimens moved up to the second week of that month, with the best results. Of course, with these, as with other choice shrubs, the planting will have to be done with the greatest care. If there should be any doubt of their suffering from the shift, go over them carefully and cut out a branch here and there where it will be least observed. This will ease the plant considerably.

Bamboos.—These graceful evergreens, which play such an important part in the beautifying of our gardens, may now be divided and replanted. Where one has difficulty in getting them to grow satisfactorily, it may be pointed out that they should be sheltered from the cold north-east winds and partially shaded. Should the natural soil not be quite suitable, this can be made good by taking out pits 2 feet deep and a sufficient width, and making them up with good garden soil mixed with some well-rotted manure. After planting, the plants should be well watered and mulched with some stable manure. With a suitable selection of hardy varieties, there is no reason why they should not thrive almost in any district.

Box Edges.—From now till the end of the month is perhaps the best time to have all Box edges clipped. It is, however, no uncommon thing to see this work being done as early as March. This is a great mistake, as if done so early in the season the plants are sure to suffer from frost, and present a whitened appearance.

Pansies and Violas.—Continue to pick the flower-buds off as they appear for some little time yet. This will enable the plants to become well established, and they will not be so likely to be affected by drought.

Border Carnations will be greatly benefited by a dressing of soot between the rows, and afterwards have the soil stirred with the Dutch hoe. This may be repeated during the growing season. Varieties of the King Arthur type, which produce little or no grass, should in a number of cases have the flower-spike pinched to induce the plants to break and produce grass for layering.

Plants Under Glass.

Primulas.—Where more than one batch of these serviceable greenhouse plants are required, a sowing may be made now. The compost should consist of equal parts of leaf-mould and loam, with the addition of a little silver sand. This must be pressed moderately firm in the seed-pan and watered some time previous to sowing. The seed should be sown very thinly, have the merest covering of fine soil, and afterwards be placed in the warmest part of the greenhouse.

Cyclamen.—The strongest of the young plants will now be ready for potting on, and must be kept near the glass to promote a sturdy growth. It is of the utmost importance that the young plants be kept free from aphids, as if allowed to get a foothold at this stage they never do much good. To keep them free it will be necessary to fumigate them frequently. Shade them during the hottest part of the day and pot on the remainder as they are ready.

Dendrobium nobile.—This beautiful Orchid, so easy of cultivation, will now be making its growth, and should have attention. Some of the plants will require potting, others top-dressing; but they should not be disturbed at the roots more than is necessary. Remove them to the warmest part of the plant stove, where they will get plenty of light, and, if they are established in baskets, they may be watered freely and syringed several times a day to keep down red spider and thrip.

The Hardy Fruit Garden.

Swelling Fruits.—As the fruits of all wall trees begin to swell, a good coating of manure should be placed round each tree, and, where at all possible, be given a good soaking. Continue to examine trees just set and reduce the bunches considerably. The practical man will have no difficulty in knowing which to retain.

Strawberries.—Plants in pots that have been moderately forced may be planted out in a prepared bed and well watered. These will often give a supply of fruit in the late autumn, which will be immensely appreciated. On account of the roots being matted together, the plants must be kept supplied with water during the season.

Fruits Under Glass.

Figs.—The fruit in the earliest house will be ripening, and must have less moisture and more air admitted. Trees swelling the fruit will require abundant supplies of water, besides frequent doses of liquid manure. Thin out and stop shoots to avoid overcrowding, as each shoot must be fully exposed to the sun to develop the next crop.

Vines.—There will be much to do in the vineries during the next few weeks. In the earliest house the Grapes will be colouring, and these will require abundance of air, while in succession houses the Grapes will be swelling and the latest varieties will now be breaking. Keep a sharp look-out for those destructive weevils which play such havoc with the foliage. Where they are troublesome, the best time to search for them is just as darkness is coming on. They will be found on the back wall, and if newspapers are placed under the rods, they can be caught by giving the rods a sharp tap, when they will fall into the paper. They should then be collected and destroyed.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopeloun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON AURICULAS.

THIS month the plants will be getting past their best, and the earlier-flowering varieties are nearly over. The flowers should be pinched off at the top of the truss and the stem allowed to gradually die and dry up, when it can be easily removed later on.

Repotting.—I always like to have the bulk of the repotting done during the month of May, and usually begin directly the plants have passed the flowering stage. The rooting medium should consist of the best fibrous loam three parts and leaf-mould one part, to which is added a sprinkling of sharp sand or crushed oyster shells. A 6-inch potful to every bushel of the mixture will be ample. Where the loam is of poor quality, a little decayed manure or bone-meal may be incorporated in the compost. This must not, however, be overdone, and for the benefit of the beginner I may state that a 4-inch potful of bone-meal to each bushel of soil will be sufficient; but with decayed manure, such as may be obtained from an old hot-bed, the careful grower is not likely to exceed the limit.

How to Repot.—Large pots are not required, and for fully grown plants I should select a receptacle about four inches in diameter, with, perhaps, a pot half an inch larger for exceptionally fine specimens. Smaller examples should be placed in pots just large enough to comfortably take the roots. The best pots for Auriculas are those of the long thumb pattern, and are usually supplied without rims and not glazed. Good drainage is most essential, and the pots can be filled one-third of their depth with clean potsherds, over which is arranged a thin layer of fibrous loam to secure a free outlet for water. Both the pots and the drainage material must be quite clean, and if they have been previously used for Auriculas, a good scrubbing will be needed to remove all traces of the woolly aphis. Having prepared the soil and pots, the repotting may be commenced. All the old drainage is taken away and most of the soil, but I do not agree with the method of shaking all the compost out and washing the roots in a concoction of soft soap and water. Enough soil, however, must be removed so that the tap-root can be examined, and if the end is decayed, it should be cut back to the living tissue and then rubbed over with a little powdered charcoal or lime. In all probability the roots will be partially covered with the woolly aphis, but the amateur need not be alarmed, as it is very questionable whether this pest does any harm. Before disturbing the ball of soil I just go over the roots with methylated spirit or Tobacco powder if this pest is present, and most, if not all, of the aphides are destroyed. The plants are placed in the pots so that the leaves are near the soil, which is made moderately firm, leaving sufficient space for watering purposes.

After-Treatment.—This I shall deal with more fully next month. For the present keep the plants shaded from all strong sunlight till they are re-established. A good watering will be needed after they have been arranged in their growing quarters, and afterwards they must only have enough water to just keep them from drooping.

T. W. BRISCOE.

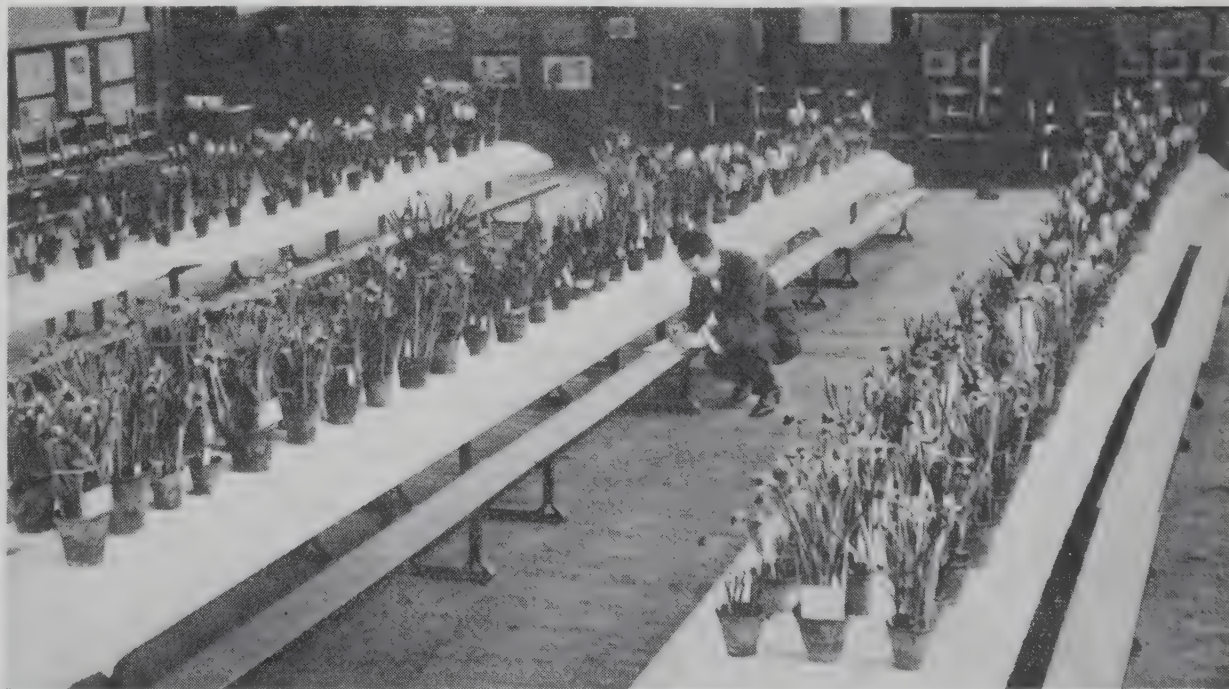
SCHOOL FLOWER SHOWS IN SPRING.

FOR the last seven or eight years we have had, every spring, a show of bulbs grown in pots at our small school. During three years of this time we were fortunate in having Mr. Charles Hodson as our master, for he did much to develop it, and to him we owe much of our success. Twelve months ago he left to take charge of the large and important boys' school at Paddock, which is now practically part of Huddersfield. Thither he has transplanted our show. On Saturday, March 7, the offset bloomed. I was there to see it, and the result gave me a very great deal of pleasure and satisfaction. I came away feeling more than ever that all such shows are an admirable adjunct to the ordinary curriculum of a school. Children, parents, grandparents, friends, old scholars, educational big-wigs, inspectors, school managers, clergy and teachers filled the room,

for their own sake, which in turn may, I hope, become the foundation of a hobby which for rich and poor alike is surely among those that are the most lasting, pleasure-giving and practicable of all.

The illustration on this page gives one a very good idea of how the schoolroom and desks may be arranged. If the competitive classes of the children can be supplemented by a display from a neighbouring greenhouse, or if some cut flowers can be begged for selling, it will add to the interest. The success of the display naturally depends upon the varieties of bulbs chosen for the children to grow. Tulips are always the difficulty, and I do not recommend these until the children have become familiar with growing Daffodils and Hyacinths. I have also found by experience that either the last Saturday in February or the first one in March are the best dates for the show.

The two main items of expense are the provision of prizes and the purchase of bulbs. We generally at my own school give four prizes, or sometimes five, in each class. As a rule, they are one shilling, ninepence, sixpence and threepence.



A DAFFODIL SHOW IN A SCHOOLROOM.

rubbed shoulders, looked at the flowers, and generally hobnobbed and talked.

Thus partition walls of aloofness and prejudice are broken down, interest is kindled and stimulated, opportunities for home visits by the head teacher and his assistants are given, and a day quite out of the ordinary is forthwith established, which is looked forward to both by teachers and children as one of the red-letter days of the school year. To the above add the *esprit de corps* which all these things undoubtedly fosters, and I think I have made out a case for school shows even without any direct reference to the plants themselves.

The direct benefit in teaching gardening by growing a few Tulips, Hyacinths and Daffodils in pots is very small indeed. Something about the functions of roots and leaves, the necessity for water, the influence of cold and heat, and the importance of a pure atmosphere may be picked up by the sharper children. But for the many, perhaps the most particular good that this participation in the show confers is in the having something to look after and think about in a rather dull time of the year, coupled, perchance, in certain cases with the learning to love flowers

Suppose, then, that there are eight classes, the prize money would come to one pound. Again, each potful, whether it be one Hyacinth, four Daffodils or three Tulips, is sold for a penny, so there is the difference between the cost to the school and the selling price to the children to be made up. By the way, sales should *always* be effected under colour and *never* under name.

I close these notes with a list of what I have found by practical experience to be the best varieties of each to grow, having due regard to price and dissimilarity: Tulips.—Vermilion Brilliant and possibly La Reine. Daffodils.—Golden Spur, obvallaris, princeps, Queen Bess, Sir Watkin and Telamonius plenus. Polyanthus Narcissus.—Dr. Holland, Mont Cenis and Alsace (Poetaz). Hyacinths.—L'Innocence, General de Wet, Marie, Oranje Boven, Schotel, R. Steiger, Grand Maître and Lady Derby—really, I may say any variety that opens well and has a strong stem.

A list of bulbs suitable for growing for a first show with eight classes is here appended: Daffodils (three in a pot, except Queen Bess).—Golden Spur, princeps, Queen Bess (four in a pot) and Sir Watkin.

Polyanthus Narcissus (three in a pot).—Dr. Holland. Hyacinths (one in a pot).—L'Innocence (white), Schotel (pale blue) and General de Wet (pale pink). If only six classes are required, leave out Queen Bess and Sir Watkin. If twelve classes are wanted, add Tulip (three or four in a pot) Vermilion Brilliant; Hyacinths Oranje Boven and Grand Maftre; and Poetaz (three in a pot) Alsace. The most useful-sized pots are 4-inch, 5-inch and 6-inch. JOSEPH JACOB.

[We are pleased to publish Mr. Jacob's article, and hope that it will induce others to hold similar shows. Those who have never seen it cannot realise the vast amount of pleasure that a child obtains from cultivating a few bulbs in pots. It is summed up in those magic words of pride: "I have grown them myself." Mr. Jacob will be glad to give anyone assistance who is contemplating starting a show of this kind.—ED.]

FILMY FERNS FOR A COOL STRUCTURE.

IT is matter for surprise that the Filmy Ferns, even in large establishments, are generally conspicuous by their absence. I can only assign one reason for this, viz., that their merits have not been sufficiently brought before the public, either by vendors or writers. They are invariably found, with true modesty, like a King-designate of old, hiding away among other plants. Having had the privilege of serving my apprenticeship where one stately specimen of the class (*Todea superba*) was grown, I have always had a warm place in my affections for the "Filmies," and have continued to cultivate a few; most visitors who come this way are invited to have a peep at them, and few see them who do not readily appreciate their beauty.

Their culture is very simple, shade and moisture being the two essential conditions. Here we grow the *Todeas* in a small unheated structure at the north side of the fernery, while a *Trichomanes* and several *Hymenophyllums* are grown in a Wardian case in the fernery, where a warm greenhouse temperature is maintained; but any of those noted below can be grown in an unheated structure if they are not subjected to more than a few degrees of frost. The *Todeas* are best grown in pots, but the *Hymenophyllums* do better in pans, and the *Trichomanes* can be grown in either. All of them should have perfect drainage, and they all succeed well in a compost of equal parts of turfy loam, turfy peat, rough Oak or Beech leaf-mould and sand, with a liberal admixture of rough charcoal and sandstone. They may remain undisturbed for several years. As already indicated, they love shade, and from early March to late September they should be heavily shaded. With regard to watering, they should be sprayed once or twice daily during summer and every few days during winter, according to weather conditions and the character and location of the structure. Water must also be supplied liberally at the roots, especially in the case of the *Todeas*.

The following are grown here, and can all be heartily recommended for cool treatment: *Todea superba* and *T. pellucida*—these two require ample room, as under suitable conditions they develop fronds over two feet in length; *Hymenophyllum demissum*, *H. tunbridgense* and *Trichomanes radicans Andrewsii*, an improved variety of the Killarney Fern. CHARLES COMFORT.

Broomfield Gardens, Davidson's Mains, Midlothian.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLETS NOT DOING WELL (*G. R.*).—We fear we cannot say what the cause of the trouble is without seeing the specimens, but we think your best plan would be to make up quite new beds before starting the plants in the frames, keep them thoroughly ventilated, and make sure water never stands about their crowns.

IRIS RETICULATA (*U. S. A.*).—If you permit the plants to mature their season's growth and lift the bulbs any time between the middle of June and the middle of July, no harm will ensue. The larger bulbs will then flower in 1915 quite well. It is important that the bulbs are not sun-dried, that is, spread out in the sun to dry, and equally important that they are not kept too long out of the soil. If you give the bulbs a maximum period of one month's rest, keeping them meantime in a pot of quite dry sand, they will be quite safe. Kept too long in the dry state, a species of dry-rot overtakes the bulbs and they perish in the soil after planting. When replanting, employ a liberal depth of sandy loam and avoid crude manures.

ROSE GARDEN.

BANKSIAN ROSE NOT FLOWERING (*F. S.*).—You must not prune the small twiggy growths; but if the tree is too smothered with big shoots, cut some quite out to their base, so as to allow sun and air to enter freely. If you could train the tree into a sort of bower, we think you would soon obtain blooms in your part of the world. The Dorothy Perkins should have some of its main growths trained horizontally, and if there is a dense mass of growths, cut out some of the very oldest at once. The small shoots springing from the main growths should be cut back to two or three eyes, excepting some which may be stronger than the others. These you can retain from 12 inches to 18 inches in length.

PRUNING A SWEET BRIAR HEDGE (*E. C.*).—It is usual to prune hedges of Sweet Briar after the flowers are over, but, providing you do not mind losing a certain number of flowers, the work may be done at once. Cut as much of the old wood out as possible, and tie the younger branches into position in order to keep the fence of uniform density. Towards the end of the summer go over the hedge again and remove or shorten any branches, where necessary, thus leaving it tidy for the winter. If you require to increase your stock of Violets, leave a sufficient number of runners for your purpose; but if you think that you can procure all the plants you require by dividing the old ones, then remove all the runners at once, for they will only tend to weaken the old plants.

PRUNING ROSE REVE D'OR (*E. L. J., Croydon*).—Yes; our correspondent was right in his advice. Of course, you would not cover your wall so quickly by cutting back the annual growths so hard as recommended on page 154, but you would obtain blooms of a superior quality from the ends of the long growths. There would, doubtless, be some flowerless growths, but if these were pinched in the autumn they would ripen well and flower the next year.

We have seen this old Rose covering lofty house fronts in Devonshire, making a glorious show, and the pruning adopted has generally been carried out with the shears. We planted several plants of this Rose last year quite late, and cut them back hard, with the result that we had fine clusters from the extreme ends of the new growths, and, as you say, with glorious foliage.

THE GREENHOUSE.

INJURY TO PELARGONIUMS (*Zonal*).—The Pelargoniums have apparently been grown in a moist atmosphere with rather a high temperature. This has made the leaves sappy, and immediately the plants suffer, if only for a short time, from dryness at the root, or are stood in a dry atmosphere or in a draught, the leaves lose more water than they can afford, with the consequence that they "burn," as those sent have done. The remedy, of course, lies in checking the rapid growth of the foliage by altering the conditions.

CULTIVATION OF LOTUS PLANTS (*Lady Beaumont*).—Lotus plants should be grown in loamy soil in shallow water in a greenhouse where a tropical temperature can be maintained. The best results are secured when the plants can be grown in a tank, the soil coming to within a few inches of the surface of the water, and a constant supply of fresh water maintained. Fair results may also be obtained by planting the roots in tubs, providing care is taken to give fresh water daily. Use four parts good fibrous loam and one part leaf-mould with silver sand about the roots. The plants resent frequent root disturbance, therefore care must be taken to plant them permanently when they are first put out. Full sun is necessary to success.

FRUIT GARDEN.

CHERRY BLOSSOM STERILE (*J. H.*).—The cause of the flowers not setting, we think, lies in their quality. If you will examine them closely, you will probably find that there is very little pollen on the anthers. If this is not so and the pollen is abundant and strong, there is no reason why the fruit should not set freely if you will take the precaution of distributing the pollen among the flowers on dry, warm days with a rabbit's tail so that it comes in effective contact with the stigma or centre column of the flower. If it turns out that the quality of the flowers is at fault, your best way is to take up the trees and replant them in rather lighter soil (although the Cherry likes a strong soil), adding plenty of drainage, and planting the top roots of the trees practically on a level with the surface soil, mounding up the surface soil to a height of 5 inches. This should be done immediately after the trees shed their leaves.

THE VINE AND ITS AERIAL ROOTS (*L. D.*).—This is a common experience with the Vine, especially with those Vines which are getting old. The primary cause, we think, arises from the fact of the root action being too sluggish and weak to support the crop of foliage and fruit, causing the Vines to throw out these roots (aerial) for further help, the growth of which the moist air of the vinery encourages. Vines are sometimes propagated by these "porcupine fibres," as you call them. All you have to do is to tie a 5-inch flower-pot full of soil at the junction of a shoot from which the roots emanate. This must be done on the first appearance of the roots. At the end of the summer the pot will be full of roots, and the shoot to which they are attached may then be severed from the Vine, and at once becomes a detached entity. The way to prevent their recurrence is to renew the Vine borders in autumn with proper Vine soil.

MISCELLANEOUS.

INJURY FROM CREOSOTE FUMES (*E. L.*).—It is highly probable that the creosote fumes have been the source of the trouble. Could you not take the plants out and heat the house up for a while? Failing this, standing pails of water about in the house may help to absorb the fumes.

TO CLEAR A POND OF ALGÆ (*G. S. C.*).—All that you can do towards clearing your pond of Algæ is to use copper sulphate at the rate of one part to from 750,000 to 1,000,000 parts of water. At this strength it is unlikely to injure the plants round about, neither will it have any serious effect upon the water in the well. The same chemical is used in some countries for clearing reservoirs of drinking water from weeds of the Algæ type. Water Lilies will grow among the weed, but will not smother it; in fact, the weed in the end will probably exercise a more harmful influence upon the Lilies than the Lilies upon the weed.

TOMATOES IN BOXES (*Nemo*).—For single plants a box 1 foot long, 10 inches wide, and 5 inches or 6 inches deep will be large enough. Top-dressings of soil and manure may be added in due course. If two or more plants are grown in a box, the latter should afford accommodation for the plants in due proportion, the box for a single plant being taken as a guide.

NAMES OF PLANTS.—*Bramford*.—*Pyrus spectabilis*.—*Niche*.—1, *Helleborus foetidus*; 2, *Billbergia nutans*.—*Cherry*.—1, *Prunus serrulata*; 2, *Lonicera punicea*.—*C. S. G.*—*Orchis mascula*.—*Quidith, Glos.*—*Daphne pontica*; quite hardy, thrives best in shade.—*H. C.*, *Sleaford*.—*Staphylea pinnata*.—*G. G.*—1, *Prunus Padus* (Bird Cherry); 2, *Albuca fastigiata*; 3, *Arthropodium cirrhatum*.—*Regular Reader*.—The Tulip is an old, unnamed garden variety. It somewhat resembles Rose Dorée.

THE GARDEN.

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MAY 16, 1914.

NOTES OF THE WEEK.

The Chelsea Show.—The Rev. W. Wilks informs us that Her Majesty Queen Alexandra has signified her gracious intention of visiting the Royal Horticultural Society's Great Show at Chelsea on Tuesday next.

Classification of Roses.—We understand that the Council of the National Rose Society have decided to class such Roses as Rayon d'Or, Lyon, Arthur R. Goodwin and Willowmere as Pernetiana Roses.

A Beautiful Gromwell at Wisley.—One of the most charming features in the rock garden at Wisley just now is the magnificent Gromwell shown in the accompanying illustration. Botanically, this is known as *Lithospermum prostratum* Heavenly Blue. The plant depicted on this page covers a space of about four feet by three feet, and is one of the best we have ever seen. It is of dwarf, shrubby character, and appreciates rather sandy soil. Its flowers are rich blue—we had almost said Gentian blue—and are always highly appreciated at this season.

Our Stand at the Chelsea Show. At the great Chelsea Show, to be held next week, our stand will be situated in the Lime Tree Avenue, and we trust that as many of our readers as possible will make a point of calling there. We also call attention to our next issue. This will be a special double number, and will contain a full illustrated report of the show. We hope to have copies on sale at our stand by noon on the Wednesday.

Planning and Planting the Little Garden.—In this issue will be found particulars of a competition for planning and planting the little garden. During recent years there has been a rapidly increasing demand for plans of gardens of small dimensions. Too often the little garden is planted piecemeal, without any thought as to its appearance when finished, and the result then is usually far from satisfactory. That a little garden can be made as pleasing and as much in keeping with the dwelling house as one of larger dimensions, we know quite well, and it is with a view to demonstrating this that the competition has been arranged. Judging from letters that we receive, many of our readers possess considerable talent in planning and planting the little garden, and we hope that this competition will be the means of bringing to light many valuable and interesting suggestions.

Canterbury Bells.—In many places these useful subjects play an important part in the adornment of the flower garden, particularly where an early summer display is wanted. To obtain good results a little extra care should be taken in the preparation of the seed-bed. The seed may be sown from now till the middle of June, pricking out the young plants early to ensure a good sturdy growth.

Planting Bamboos.—This is a suitable time for transplanting these ornamental subjects. The first and most important point is to thoroughly prepare the soil, stirring the ground to a depth of not less than 2½ feet to 3 feet, enriching it with farmyard manure. The propagation is easily

after the flowers are over. Wallflowers, Polyanthuses, Myosotis, Silene, Pansies and Aubrietias may easily be raised from seed, which should be sown without delay.

Viola gracilis.—Although it is nearly a century since this charming Viola was first introduced into this country from Greece, yet it is only of recent years it has received much attention; indeed, it practically dropped out of cultivation for many years. At the present time it is one of the most decorative of garden plants on the rockery, where it has been a mass of flower since early in the year. If used as a carpeting to a bed of white Tulips, such as Pottebakker, the effect is most striking, and worthy of consideration when planning beds for display next spring.

A Pleasing Spring Bed.—A particularly quiet and charming arrangement—and one quite out of the common run—may be made by planting a good type of blue *Scilla campanulata* between white *Polyanthus* Primroses. The green leaves of the Primroses and their milk white blooms below the blue haze of the Bluebells is very beautiful when seen from a little distance, and then in the evening, if we go closer, the combination of scents is delightful, and almost certain to make us stop a few moments to get a whiff or two more of what is to many perhaps a new fragrance.

Paulownia imperialis Flowering at Kew.—Although this Japanese tree frequently perfects its blossoms in the South-West Counties, it rarely does so in the neighbourhood of London, for the inflorescences which are formed in autumn usually fall a prey to winter cold or the frosts of early spring. They have escaped this year, however,



LITHOSPERMUM PROSTRATUM HEAVENLY BLUE IN THE ROYAL HORTICULTURAL SOCIETY'S ROCK GARDEN AT WISLEY.

and a tree at Kew, near the Temperate House, is carrying numerous heads of the large, purplish, Gloxinia-like flowers for which the tree is famous. Not for twenty years, at any rate, has it been known to blossom so well at Kew. For places where it is likely to perfect its flowers annually it is an excellent tree to plant, for not only are its flowers showy, but the leaves also are ornamental. In less favoured gardens it may, however, be used to produce a subtropical effect, for if kept to one stem and cut back to near the ground line in spring each year it forms enormous leaves, often 2 feet across. It must, however, be planted in good rich soil for this purpose.

The Propagation of Spring-Flowering Plants. Most of the plants for spring bedding require to be propagated now. The choicer varieties of *Aubrietia* should be propagated by cuttings as soon as the flowering period is over. These may be struck in boxes of sandy soil if placed in a close pit and protected from strong sun. Double and single *Arabis* may easily be increased by division of the plants

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Forget-me-nots in the Rock Garden.—The Forget-me-nots are a valuable section of our spring-flowering plants, their blue colour making such a pleasing contrast to the yellow of the Narcissi which bloom at the same time in my garden, the Myosotis forming a neat and charming carpet through which the Daffodils push up. Of the several Forget-me-nots now seen in the alpine garden, the form of *M. alpestris* known as *rupicola* (or is it a species?) is very dwarf and attractive; while another of considerable charm and becoming deservedly popular is the variety *Ruth Fischer*, having particularly bright-coloured flowers with a yellow centre. For the bog, *M. cæspitosa*

Disease in Chionodoxas.—I am much interested in the note by Mr. Hadden and your editorial remarks upon it on page 215, issue May 2. The fact that *Ustilago Vaillantii* occurs on *Chionodoxas* was first made known to me by some bulbs being sent me by Mr. Edward Whittall of Smyrna, with a remark to the effect that they had a "smoke-coloured eye." On their flowering, the centre of the flower was seen to be filled with grey fungoid growth, and Mr. Whittall afterwards wrote to inform me that the "smoke-coloured eye" was caused by this fungoid disease. On observing it I pinched off the flower, but the following year the fungus again appeared. In some following seasons the same thing happened, but I never saw any other plants, either of *Chionodoxa* or *Scilla*, affected with this *Ustilago* in my garden. As the disease appeared to be persistent in the bulbs, I lifted and destroyed them, in case they

your readers would recommend any new *Primula* suitable for growing inside in winter which would be free from this danger of rash.—J. D.

Aster Disease.—In your issue of the 4th ult., page 167, there is a corroboration from a Kentish reader, "T. W.," of my advice *re* treating China Asters as hardy annuals; he then arraigns me for advising non-thinning of the seedlings. I do advise it, where necessary, but in the great majority of cases the seed is too scarce to make a thick sowing; also I was more concerned with disease prevention than with general culture, and wittingly used the words "neither transplanted nor thinned," because I have purposely left very thick sowings as an experiment to see if the decrease of stamina so caused would render the plants susceptible to disease, but found it was not so, and in each case the quality of the bloom surpassed my expectations, considering their crowded condition. Moreover,

against the theory that the disease is largely caused by the plants getting leggy in the seed-boxes, it is a well-known practice in many understaffed gardens to sow half-hardy annuals so thinly in the seed-boxes that the pricking off process may be omitted. Under these circumstances the young plants have no chance of becoming leggy, and yet I know from experience that Asters so treated are unreliable, and, apart from this, it would not account for large thriving plants—the picture of health and often actually in bloom—collapsing and dying in an hour or so.—F. M. S., *East Yorks.*

Saxifraga burseriana and its Varieties.—If I should be one of the perpetrators who have used the word "type" in a misleading sense, I beg "E. H. J.'s" (page 215) forgiveness, asking him to put the blunder down to my inexact knowledge of English. I now see I should have spoken of "species" for these, as they occur in Nature. I meant to refer to it in my note (page 179, April 11). I am, however, pleased "E. H. J." referred to the late Mr. Selfe Leonard as having been the first to introduce improved types "from a new locality," for this commendation reflects some of its rays on my mediation. In the spring of 1897 Mr. Selfe Leonard received from me a

large consignment of *S. burseriana*, in reference to which he wrote me in the ensuing spring that by it he had made a most satisfactory purchase, the majority of the plants having proved to be the variety major. Since that time I have, almost annually, supplied plants to England, collected in that same locality, and cannot help thinking that to varieties selected from these consignments the big names now existing have been given. I do not know whether *S. burseriana* is raised from seeds to any extent in England. I had the advantage of accompanying Mr. Selfe Leonard on a pleasant trip in the Tyrol in the summer of 1897, and on his untimely death afterwards I have, in memory of this gentleman's genial personality, kept his catalogue by me ever since. In this catalogue is figured a plant of *S. burseriana* major, the photograph of which I have no doubt was taken from one of those plants supplied to him by me.—E. HEINRICH, *Planegg, Bavaria.*



MYOSOTIS RUTH FISCHER. THIS HAS BRIGHT BLUE FLOWERS WITH YELLOW CENTRES.

Rehsteineri is a delightful subject, producing its brilliant *Eritrichium*-like flower 1½ inches to 2 inches above the soil, and spreading in a close matted carpet over the moist earth.—REGINALD MALBY.

Iris pumila.—The illustration on page 225 of last week's issue shows clearly that the Iris in question is not *I. pumila* but *I. Chamæiris*, for the plant apparently produces a stem of several inches in length. This is *I. Chamæiris* from the South of France and North Italy. The true *I. pumila* has practically no stem, but a perianth tube of 2 inches or 3 inches in length. *I. pumila* is in many localities even more variable in colour than *I. Chamæiris*, which in some districts is all yellow, in others all purple, while in others, again, many colour varieties are found growing together. Unfortunately, the true *I. pumila* is comparatively rare in cultivation.—W. R. DYKES, *Charterhouse, Godalming.*

affected others. The bulbs were those of *Chionodoxa sardensis*. Your advice to remove the affected plants as soon as seen is excellent, and should be followed.—S. ARNOTT, *Dumfries.*

Primulas Causing Rash.—I should like to call the attention of your readers to the danger attending the growing of *Primula obconica* and *P. malacoides*. I have grown these plants in my conservatory for a number of years, and they have been a great source of pleasure to me, as well as being most useful for table decoration. My gardener has worked among them with the greatest freedom for many years, but this year he was attacked most severely with a rash, which caused great suffering and sleeplessness. I had, therefore, much to my regret, to destroy over fifty fine plants. May I suggest to anyone growing these plants that gloves should be worn while handling them? In addition to the above-named Primulas, I have grown *P. kewensis*. I should feel glad if any of

Gentiana acaulis Sporting.—We have in this nursery a bed of *Gentiana acaulis* raised from seed. I notice among this bed one plant which I am sure is of interest to alpine plant growers. There are two flowers on this plant, which has only one head; and one flower is pure blue and the other an absolutely pure white. It is not a case of two seedlings planted together. I wonder if any other readers of *THE GARDEN* have had a similar freak, as it must be.—R. R. H. HAYES, *Alpine Gardens, Keswick*.

Winter Treatment of *Gentiana verna*.—Last year I read in *THE GARDEN* a note from Mr. R. A. Malby advising that *Gentiana verna* should be covered with glass during the winter. I put glass not only over some plants of *G. verna*, but also over some of *G. acaulis* last autumn. The result has been eminently satisfactory, as the covered plants have flowered bountifully this spring, while those in the same bed which received no such attention have not a bloom upon them. I am very grateful to Mr. Malby for the "tip" he gave *THE GARDEN* readers. Most probably he has gone far to solve the difficulty many people have with these capricious plants.—W. A. BILNEY.

Hardiness of *Arabis aubrietioides*.—I observe that some say that *Arabis aubrietioides* is as hardy as the common white *Arabis* or Rock Cress. I must take exception to this, as *A. aubrietioides* is not so hardy, and will not stand some severe winters in which both *A. alpina* and *A. albida* are unharmed. It should, I think, except in the warmer parts of the United Kingdom, have a more sheltered position than need be given the other *Arabises*. It is acceptable to many because of its delicate pink flowers. It is of looser habit than most of the *Aubrietias*, but for the shade of colour I should prefer *Aubrietia Bridesmaid* to *Arabis aubrietioides*. The latter is, however, a freer-growing subject, and looks well over the stones of the rock garden. It is increased by division of old plants or by cuttings or seeds.—S. ARNOTT, *Dumfries, N.B.*

Too-Much-Alike Auriculas.—I have analysed the price-lists of four of the principal specialists of this lovely spring flower, and find enumerated in the show section thirty green-edged, twenty-four grey-edged, twenty-two white-edged and forty selfs, also one hundred and sixty alpines, all deemed worthy to bear names. It is safe to say that not more than 15 per cent. of the above are ever entered for competition. Is it that the remainder are not up to show form, or is it (as in the case of Sweet Peas) a question of too much alike? Will one of the *cognoscenti* whose articles in your valued paper have done so much to popularise this flower, and whose advice has been so valuable to all interested in its culture, favour us with a select list of alpines, limited to those of very distinct coloration and omitting high-priced novelties? I am convinced that such a list would be much appreciated by very many enthusiastic but short-pursed novices such as—TAPLOW.

Two Good Late Daffodils.—For the purposes of this note I exclude the Poeticus varieties, and refer to what are usually termed "Daffodils" by ninety-nine people out of a hundred. Those who wish to have as long a flowering season as possible may be glad to make a note of Amber and Steadfast as two of the very latest to bloom. Both belong to the peerless (2b) section, of which Lady Margaret Boscawen is a well-known example. Steadfast might be a small sister wearing the

same cut and same coloured clothes. Amber has longer and narrower perianth segments, and a much narrower cup or corona, which is of a deep amber shade of yellow, in some years almost an orange. Both varieties are robust growers, and as useful for cutting as in the garden, for they have fairly long stalks. I grow a variety called Lady Jellicoe, which is the counterpart of Amber, except that the corona is of a slightly deeper shade—at least I think it is, but the difference is very small. If anyone grows or knows both of these (Amber and Lady Jellicoe), I would be very much obliged if they would send a short note about them to *THE GARDEN*.—JOSEPH JACOB.

Newly Planted Chionodoxas.—In view of the evidence which appeared upon page 202, I think I owe to the author of the original note upon *Chionodoxa sardensis* an admission that he is correct in stating it as a general rule that this delightful spring bulb flowers better when established than when freshly planted. With reference to the Rev. Joseph Jacob's query, I may say that my experience of this season's bulbs is not an exceptional one. I well remember that the first bulbs I ever planted, viz., about seven or eight years ago, flowered more vigorously than they have ever done since. I attributed this to the fact that they partly exhausted their strength in ripening a large quantity of seed. But as to the colour of *Chionodoxas*, I am adamant. Not all the colourmen in the world shall persuade me that the blue of *Gentiana acaulis*, *G. verna*, *G. bavarica*, *G. septemfida* and others is to be found in the *Chionodoxa*. There are a few plants with which I am acquainted, such as *Tecophylaea cyarocrocus* and *Tillandsia Lindenii*, for example, which possibly possess blue of a similar intensity. But this is not sufficient. The unique value of gentian blue lies in its metallic or mineral quality. You find the same quality in certain butterflies, most notably in a few Malaysian species. You find it in certain minerals, and, lastly, in freshly tempered steel. I have puzzled in vain to discover why the *Gentian* should possess this peculiar quality. Glorious as is the blue of the *Chionodoxa*, the *Anchusa* (Dropmore) and such other pure blue flowers as *Nemophila insignis*, *Cyananthus lobatus*, *Muscari Heavenly Blue* and the *Scillas*, it is merely blue. *Gentian* blue is something more, not merely by reason of greater intensity, but by reason of its heavenly lustre. Why should Mr. Jacob call upon me to furnish a name for the blue of *Chionodoxa*? Is it bluer than the *Scillas*? Let us, rather than have to adopt the clumsy expedient of referring to "Scilla" blue, "*Chionodoxa*" blue and so forth, unite our efforts to crush the monsters who call *Veilchenblau* the "blue Rose"; who talk of the "blue" *Gladiolus*; who, having progressively applied the sacred term "blue" to every conceivable shade of purple, mauve and lilac, will in all human probability proceed next to commit the final desecration of applying it to magenta. Were we once to rescue "blue" from the hands of these fiends and restore it to its pristine significance, there would be no need to invent fresh colour descriptions.—RAYMOND E. NEGUS, *Walton-on-Thames*.

FORTHCOMING EVENTS.

May 19.—Royal Horticultural Society's Spring Show at the Royal Hospital Gardens, Chelsea (three days). Devon County Show (three days).

May 20.—National Tulip Society's Show at Chelsea (two days).

SWEET PEA NOTES.

THE succession of brilliant sunny days of the past weeks has done much to mitigate the dire effects of the miserable weather of the preceding month. Sweet Peas under glass have revelled in the sunshine and the air that could be so freely given them, and, on the whole, the prospects of a better Sweet Pea year are most promising.

Sweet Peas Flowering Earlier.—A few years ago it was considered exceptional to have a few Sweet Pea blooms exhibited at the Temple Show, but in mid-April I saw some magnificent blossoms. Messrs. Dobbie and Co. have Sweet Peas the equal of which I have never seen at this period of the year, and we may expect a fine exhibit from them at the forthcoming London Show. Certainly the lovers of Sweet Peas owe a debt of gratitude to a grower like Mr. Andrew Ireland, with whom "streak" is unknown, and who proves conclusively that the Sweet Pea can be grown successfully both in the open and under glass, and that it does not require exceptional treatment, a fallacy still too rampantly prevalent. When will some readers realise the fact that successful blossoms can only be obtained if the root action is freely active and healthy? The gardener can know no set time for any particular operation, and more especially so the Sweet Pea grower. The soil must be in a fit condition, or the plants will not thrive. Therefore the man who, because it was March, and in spite of the rain, worked his soil, now finds that it is a mass of huge solid lumps, totally unusable. The precious Peas are shrivelling away, and success this year is impossible. Many are the grumbles one has heard during the past weeks, and all due to the fact enumerated above.

Abuse of Manures.—The market is flooded with "prepared plant foods," and an indiscriminate use of these will produce untold trouble and loss. At once let it be stated that Sweet Peas do not require gorging with stimulants. If a slight dressing of superphosphate, bone-meal and soot has been forked into the top soil previous to planting out, then nothing more is required until the first crop of flowers has been gathered. If a spell of very dry weather should set in in June, then watering with very weak soot-water is beneficial. By the way, a word of warning here may not be without profit. Soot-water such as I have often seen used—a thick, slimy, black slush, which leaves a coating upon the surface of the soil—is a positive danger. Soot should be put into a bag and the whole immersed in water, which extracts all the nutritive values, but the water remains only slightly coloured. This is the condition in which it should be used.

A Suggestion.—The notes on Sweet Peas that appear in *THE GARDEN* might occasionally be made more interesting if readers would forward any notes on difficulties or observations to the Editor. Many varieties of Sweet Peas differ in vigour of growth and colour of flower in different localities—some soils are specially suited for some varieties, while there are many varieties that require special treatment when given outdoor culture. These or any other points could be considered and fully discussed, and would be a welcome variety from a general article. Finally, every Sweet Pea lover should join the National Sweet Pea Society. In spite of what has been said about it, this society is flourishing and doing a great deal of good work. The secretary is Mr. H. T. Tigwell, Greenford, Middlesex, and the annual subscription is only 5s. M. CROW.

SOME BEAUTIFUL POPPY-WORTS.

THE MECONOPSES.

(Continued from page 230.)

AS already intimated, these Poppyworts love moisture, or that degree of uniform root coolness which is not a bad equivalent. In some measure, too, they prefer shade, though, with root moisture assured, this would only be desirable for securing greater longevity to the flowers, while in cold districts with much rainfall, shade should be altogether dispensed with. In these latter, too, shade would probably militate against the production of good pollen, and, in turn, seeds. Hence, in all the circumstances, a fairly open position, with root moisture, might be regarded as best. A fairly deep bed of soil well enriched by cow-manure should always be provided, loam, peat and leaf-soil constituting the chief, with cow-manure freely added. To those whose good fortune it is to be able to harvest good supplies of seeds each year, the importance of free grouping should not be overlooked, and it would be worth a long day's journey to be able to see a few hundreds of the nobler kinds in any garden. As yet, however, such a consummation is more in the nature of a dream-picture than anything else, though of subjects so unique such an ideal is worth striving after. Moreover, the plants themselves are so essentially worthy of specialisation, and if difficulties and disappointments bestrew the way, a greater honour and satisfaction will be the reward of he who first overcomes them. It may be, of course, that, like certain *Oncocylus* Irises, these Poppies, fretting for the conditions to which for ages they have been accustomed in their native wilds, refuse to be comforted in lowland places. But of this experience will be the best guide. The following are the best species:

***Meconopsis aculeata*.**—A beautiful species from the Western Himalayas, where it is found at altitudes varying from 11,000 feet to 15,000 feet. The leaves forming the rosette are pale green, deeply and irregularly lobed, and furnished with long, tawny-coloured hairs or bristles. In cultivation the plant is rarely more than 18 inches high at flowering-time. Flowers somewhat saucer-shaped and of a purplish sheen, which contrasts well with the yellow stamens.

M. cambrica (the Welsh Poppy) is well known and needs but little recommendation. A lover of cool, moist places, free in flowering, appearing in all sorts of places where perchance a seed or two may have fallen. It is one of the prettiest of all plants for naturalising. Though more or less perennial, it is best raised from seeds. The plant is dwarf, and produces a profusion of yellow flowers. The double orange and yellow forms are pretty variations, and there is room for more.

***M. chelidoniifolia*.**—A dwarf-growing perennial species from the Thibetan frontier. The flowers are clear yellow and an inch or so in diameter.

The leaves are deeply lobed and approximate in form to the Celandine (*Chelidonium*), hence the name. May also be increased by division.

M. grandis is also of perennial duration, happily, as it produces seed but rarely in this country. The plant comes from the Sikkim Himalayas, is of rather tall habit, and bears flowers of a purplish blue colour.

***M. heterophylla*.**—A free-growing, free-flowering annual species from California, which, producing seeds in fair abundance, is easily increased by these means. A somewhat variable kind of a foot or 18 inches high. The flowers, borne on slender stems, are red or coppery red, sometimes orange, and with a dark blotch on the petals. Quite an effective species when in flower.



A BEAUTIFUL BLUE POPPYWORT: *MECONOPSIS SINUATA* *LATIFOLIA*.

***M. integrifolia*.**—One of the most remarkable of the entire genus, and now well known to all cultivators of choice flowers. The most successful cultivator of it that I know is Mr. W. A. Milner, Totley Hall, who achieves considerable success with it year by year in his Derbyshire garden 700 feet above the sea. Mr. Milner raises the seedlings in the slight warmth already noted, and attaches importance to the method. The plant is found at 11,000 feet to 15,000 feet in the mountains of China and Thibet, where it grows in endless quantities. The great saucer-like flowers are of soft yellow colour, with orange-coloured anthers. The flowers vary in size, form, and in the number each plant produces.

The leaves are entire, variable in size, though always covered more or less with silky hairs. It is a moisture-loving species, of about two feet high when fully grown. No member of the genus is more worthy of specialisation.

M. nepalensis (Nepaul Poppy).—The plant formerly associated with this name had yellow flowers, the true plant having somewhat unattractive flowers of reddish purple colouring. Its fine rosettes of deeply lobed, hairy leaves approximate to those of *M. Wallichii*, and the plant is worth growing for its foliage effects alone.

***M. paniculata*.**—This is the yellow-flowered species formerly known as *M. nepalensis*, and is as good among yellow-flowered sorts as *M. Wallichii* is among the blues. The rosette of leaves has all the characteristics of the last named, save that the leaves are shorter. The plant is fully 5 feet high, a moderate seed-bearer, and one of the most reliable of the Himalayan kinds.

***M. sinuata latifolia*.**—This was at one time confused with *M. aculeata*, but differs from it in its larger, longer leaves and distinctly sinuate margins. In general habit it has much in common with the other species named, and attains the same height. The flowers are blue. It is a fairly reliable seed-bearer.

***M. racemosa*.**—The flowers, which are variable in colour, are neither attractive nor large, those I have seen being of a nondescript purplish or lilac tone and less than 2 inches across. The plant is about two feet high, has erect, unbranched stems, the flowers largely axillary. The leaves are entire.

***M. Wallichii*.**—To this fine Himalayan species must be given pride of place, whether viewed in the heyday of a glorious flowering or seen awaiting that time, when the great rosettes of leaves are a picture in themselves. If this queen of the Indian Poppies never produced a flower, it would still find those who would grow it for leaf beauty alone. Well-developed rosettes of leaves may be 2 feet in diameter, the soft, tawny-coloured hairs appearing above the grey-green of the groundwork. Seen after a shower with the raindrops still upon them the effect is very beautiful. In its highest perfection the plant may attain 6 feet to 8 feet, and with its noble pyramid of flowers is imposing indeed. The flowers vary from pale blue to purplish shades, the former the more desirable because of the glistening sheen-like effects with which they are

endowed; hence seeds should be saved from these alone. With artificial pollination seeds of good quality are fairly abundant and vegetate freely.

M. Delavayi* and *M. Rudis are recently introduced kinds not yet generally known, and there is also the quaint and brilliant-flowered *M. punicea*, one of Mr. Wilson's finds, which, if not now lost to cultivation, is at least extremely rare. Thus we have presented to us in a solitary genus species possessing quaintness, interest, or rare beauty sufficient, it would appear, to satisfy all tastes, while the innate fickleness or fastidiousness of some should provide for the problem-solver food for thought and material for experiment for many days.

E. H. JENKINS.

SEASONABLE NOTES ON CARNATIONS.

THE supporting of Carnations emerges as an important cultural item, which can never be delayed without serious after-results. There are several ingenious supports which obviate attention to tying; but even where these are adopted it is necessary to use the old-fashioned wooden or Bamboo stick to protect the plants while young, and for Malmaisons and Perpetuals other supports than these are of dubious utility. The value of a stick consists in its keeping the stem perfectly straight, a condition that was of little importance thirty years ago, but which is all-important at this date, when the blooms are valued according to the length of the stems. Young Perpetuals, moreover, when growing, as they ought to grow, with great vigour, produce shoots which will snap with the least touch, and these should on that account be staked when still young and slung to the stakes. Border varieties will very soon need attention, too, and unless the plants had short sticks applied to each when planted, which is sometimes imperative when they are extra strong, some will be sure to have grown off the upright. Invariably the young assistant places the stake on the wrong side of such plants, that is, on that away from the side to which the plant leans, whereas it ought to be inserted in a position to press the plant upright without having to drag it up with a tie. All Carnations should be staked in the same manner when off the upright. Bamboo tips are very generally used for supports, but I incline to use thicker stakes, which can each be split into four. These last longer, and are considerably cheaper than the tips.

Shading.—The great variety of shades in the colouring of the old pink Malmaison, or Princess of Wales as it is often called, is sometimes and to some extent due to the quality of the soil; but the colour can always be deepened artificially by applying a proper shading that will at once subdue the light in the daytime and keep the temperature cool. The best shading is undoubtedly one of the wooden or Bamboo blinds, and the worst is whitening. The whitening obscures the glass, and so far provides a shade, but it has a very slight effect on sun-heat. Perpetuals also are the finer for being shaded. Beacon burns very badly, and the strength and delicacy of all colours is affected injuriously by the sun's rays, and perhaps also from too high a temperature, which, however well ventilated a structure may be, becomes too hot for Carnations.

Outdoor Beds.—Plants to occupy positions in beds and borders out of doors may now be drawn from among those which are to remain to produce flowers under glass. Stand them meanwhile in a sheltered position where the sun does not reach them for the greater part of the

day, and be attentive to watering lest the young roots be dried up, the result of which will be a large number of yellow leaves later, an eyesore all the season. Of all the varieties I have tried, none is more floriferous than Mrs. F. Burnett, and those to reject are such as are of a weak habit, like Lady Alington, or not productive, like R. F. Felton. The plants may very shortly be planted out, setting them so that a shallow depression is left in which to pour water until the roots have got a grip of the soil, which at planting should be very firmly compressed. The quantity of flowers produced under attentive culture is quite astonishing, and more than repays the extra labour that they exact to establish them. These plants are, moreover, valuable producers of a superior type of cuttings for autumn propagation. Some growers lift the plants and derive cut flowers from them during the early

TWO BEAUTIFUL BROOMS.

IN the two Brooms illustrated, *Cytisus præcox* and *C. albus* (the white Spanish Broom), we possess two excellent spring-flowering shrubs. They are suitable for planting in varied positions in the flower garden, pleasure grounds and woodland. Whether in groups of several plants in the borders, masses on sloping banks, a bed or two on the lawn, or dotted about singly or several in a group in the open woodland, these Brooms are very effective. The soil for *Cytisuses* presents no difficulty; in fact, they flower more freely in soils which are light and sandy than in richly manured loams. *C. albus* is sometimes seen as much as 10 feet in height; more often 5 feet to 6 feet. In addition to the pure white variety, there is a form named *incarnatus*, with prettily tinted rosy red blossoms.



CYTISUS PRÆCOX AND C. ALBUS, TWO MAY-FLOWERING BROOMS.

part of the winter, and find them also valuable decorative plants.

Removing Shoots.—I do not think it is usual to disburden Carnation plants of extra growths, a point noted in an earlier contribution. It does not at this time of year matter so much in the case of Perpetuals, but those who grow a collection of borders or shows and Picotees in pots will find the plants ever so much stronger if the "grass" is reduced, where it is more, to six young shoots on each plant. If the more advanced of these are left, the majority will flower as well as the main stem; but it will be somewhat late before a second crop of shoots for layering can be had. It is all a question of what one wants. If lots of bloom, leave the largest; if very strong layers, remove these and let the later growths remain to gain strength.

Tynningham.

R. P. BROTHERSTON

The white Spanish Broom is readily raised from seeds. *C. præcox* is a natural hybrid, the supposed parents being *C. purgans* and *C. albus*. During the second half of April and extending into May the bushes are laden with cream-coloured blossoms. It has one little fault—the odour of the flowers is not at all pleasant. With age Brooms are inclined to become leggy, and for this reason they should be discarded and replaced with young plants.

Brooms are not easy shrubs to transplant successfully, except in a small state, and for this reason it is worth growing the plants in pots for a couple of years till large enough to place in their permanent positions. To obtain bushy plants, stop and shorten the young shoots freely in early life, as it is useless, when once the plants become leggy, to cut them down. As a third companion plant to the two named, grow *C. andreaeanus*, with rich yellow and reddish brown blossoms. A. O.

TWO BEAUTIFUL FLOWERING TREES.

AT this season our gardens and woodlands are rendered beautiful by a great many flowering shrubs and trees, but it would be difficult to imagine any that give greater pleasure to their owners than the two illustrated.

The Double-flowered Cherry (*Prunus Avium*).

The various kinds of double-flowered Cherries are easy to grow, and of a free-blooming nature, each year seeing the branches wreathed in blossom from end to end. There are a dozen or more double-flowered kinds, varieties of native and exotic species, and each has its special attractions. It is, however, doubtful whether any other kind is such a general favourite as the one under notice, a variety of the wild Cherry or Gean of our woods, and a relative of many of the cultivated varieties of fruiting Cherries of our gardens. Of vigorous growth, it attains dimensions equal to those of an ordinary Cherry tree, and average-sized trees may be between 35 feet and 40 feet high at maturity. From the time the trees are but a few feet high, or within a couple of years of grafting, they blossom freely, and continue to do so until old age deprives them of the necessary vitality. As in the case of fruiting Cherries, the pure white flowers appear from buds on the previous year's wood, and from short, spur-like growths on older parts of the trees. From three to four flowers, each $1\frac{1}{2}$ inches to $1\frac{3}{4}$ inches across, terminating a stalk 2 inches long, are borne in a cluster, three or four clusters often appearing together. An idea of the wealth of blossom produced by trees fifteen years to twenty years old may be gathered from the accompanying illustration. Like other members of the *Prunus* family, this variety thrives most satisfactorily in good, well-drained, loamy soil, and in preparing a position for a specimen it is worth while going to a little trouble to ensure these conditions. A station 10 feet across will not be too large to trench from $1\frac{1}{2}$ feet to 2 feet deep, and prepare with good soil, for the extra trouble and expense involved will be amply repaid by the additional vigour and beauty of the tree. It is perfectly hardy, and there are few parts of the country where it may not be planted, providing it can have shelter from violent winds while in blossom; for the purity of the flowers is endangered by exposure to cutting winds. One point which is worthy of consideration in the choice of a position for this tree is the selection of a site where a background of coniferous or other evergreen trees is available; for the white flowers are seen to far greater advantage by the aid of such a background than when exposed to the skyline. In addition to being such a useful outdoor

tree, young examples are valuable for forcing, and in February and March create a pretty effect in conservatory or greenhouse. An item in the cultivation of this tree which should not be overlooked is its dislike to severe pruning, for the careless removal of large branches is almost invariably followed by gumming, which may end in the death of the tree. When pruning is necessary, therefore, remove the branches carefully close to the trunk, pare the wounds round with a sharp knife, and provide a coating of coal-tar.

The Japanese Crab (*Pyrus floribunda*).—

Although often referred to as a species native of Japan, this showy tree is considered by many authorities to be of hybrid origin, the Japanese

as much in diameter, shapely specimens, well furnished with branches from base to summit, and about the end of April every branch is wreathed with blossom to such an extent that the woody parts of the trees are invisible. The flowers are a delicate pink, the colour being deeper and richer in the bud and when semi-expanded than in the fully open state. Growing with the type are several examples of the variety *atrosanguinea*, which is easily distinguished by its richer and deeper-coloured flowers. Where one specimen only is desired, it is advisable to select the variety in preference to the type; but where both can be grown, one helps to show off the other. Although mature specimens may be

met with as large bushes 12 feet to 15 feet high and 20 feet to 30 feet across, it sometimes grows into a small tree 20 feet to 25 feet or more high, with a very wide head, its size being determined largely by the conditions under which it is growing. For preference, it should be given a sunny position, sheltered from north and east; not that it is tender, but that cold winds from those quarters may injure the flowers. Provide deep, loamy soil, and see that the ground is well worked before the tree is planted. It gives little trouble; an occasional thinning may be necessary, but regular pruning is not desirable. American blight may attack it, and if such a thing happens, spray with a paraffin wash in summer and a caustic wash in winter. The fruits are not borne freely, and they have no pretensions to beauty. D.



A DOUBLE-FLOWERED CHERRY, *PRUNUS AVIUM*. THIS IS A VERY EFFECTIVE SPRING-FLOWERING TREE.

ROSE MRS. ARTHUR MUNT.

(HYBRID TEA.)

I HAVE frequently contended that this lovely Rose was badly treated when it was passed over by the judges who award the gold medals. No one who has seen it growing among the numerous pale-coloured varieties can resist its peerless beauty, and last year with me it was remarkably good. I can recommend it as a really good all-round variety. The colour is deep cream, which becomes

P. Toringo and the Asiatic *P. baccata* being suggested as its parents. In support of this theory there is the fact that it has not been found in a genuinely wild state, while the distinctly lobed leaves of the Japanese species may sometimes be noted among those of normal shape on branches of *P. floribunda*. Whatever its origin, it is an exceedingly ornamental tree, and was originally introduced to this country from Japanese gardens. No more worthy example of its value for decorative gardening can be found than the large group of a score or more well-grown examples which occupy a mound, interspersed with dark-leaved conifers, near the Water Lily House at Kew. Some of these trees are 15 feet or more high and twice

a sort of ivory cream with a peach tint as the blooms develop. The flowers are large, full and perfectly formed, with a high-pointed centre, and I can well understand Messrs. A. Dickson and Sons saying it is one of the very best of their productions. We are having such a large number of light-coloured novelties that it becomes quite embarrassing to know how to use them all, and yet there is such loveliness and distinctness in many of them that one cannot discard any. It will soon, however, become necessary for some authority to classify the various colours, especially the creams, buffs and pinks, and to let amateurs know which are really the best of each section.

DANECROFT.

ROSE-GROWING IN TOWN GARDENS.

Preparing for Exhibition.—Those who have tasted the joys of successfully exhibiting their Roses usually become enthusiasts for all time, and hence the number of competitors at shows increases from year to year, and Rose societies get more numerous. To ensure success at the leading exhibitions is the highest flight of the cultivator's art; but almost every town in the kingdom now boasts a horticultural society. Usually these have many classes to suit the smaller Rose-grower, and anyone who is sufficiently enthusiastic and painstaking may become a prize-winner. There is much benefit to be derived from exhibiting, apart from mere "pot-hunting." It instils enthusiasm as nothing else can; it enforces hard pruning—the most difficult lesson for the amateur to master—and it also stimulates the imagination and leads to the idealisation of the perfect bloom. Moreover, the ardent rosarian is in need of "letting off steam" from time to time. He must have others to see and admire his peerless blossoms, and to talk about them. Membership of a society gives him this opportunity, whereas if he meets no one of like tastes, and is compelled to talk "Roses" to the world at large, he is apt to become as great a nuisance as the too-intense golfer. A lack of confidence often causes the grower to postpone showing until a more favourable season, but this is neither good policy nor good sportsmanship. The putting up of a box of Roses, even if unsuccessful, teaches one much of the art of exhibiting that it is impossible to convey by chapter and verse, and it adds a fresh pleasure to life.

In Feeding the Roses an early start should be made, and cow-manure water is the safest thing to commence with. This should be given to the plants from the first week in May, using it very well diluted, and applying it about once a week. Towards the end of the month an artificial manure may be given alternately with it. Mix together superphosphate of lime and nitrate of potash in proportions of three to one, dissolving 1oz. of the mixture in each gallon of water. Let this be one week's diet, and the next may consist of a solution of sulphate of ammonia (half an ounce to the gallon of water). If these three stimulants are given in turn (of course, only to healthy and established plants), the Roses will have little excuse for failure. As the show-time approaches, a little sulphate of ammonia may be added to the contents of the manure tub, but it should be at a rate not exceeding 1oz. to four gallons when diluted. Do not bother about soot-water; it is messy and gives unnecessary trouble. Sulphate of ammonia contains exactly the same manurial properties, is infinitely cleaner and easier to handle, and the supply can be better regulated;

but care must always be taken to use it only in a very weak solution, the proportions never being greater than those given. The plants will have been pruned back hard, and this will increase the tendency of many kinds to throw several flowers from each stem. The shoots must, of course, be disbudded, but it is well to allow two buds to remain for a little time, until one can judge to some extent when the blooms will develop, and to guard against mishaps; but the grower must make up his mind as soon as possible which of these to discard. All plants should be carefully examined to see whether the growths have any tendency to touch one another, and if so, they must be staked and tied apart, so that the foliage may not be damaged by thorns. Every plant must be looked over daily for caterpillars, which frequently ruin the most promising buds before their presence is suspected. The shading, tying, arrangement and dressing

multiflora varieties which are really perpetual flowering from the time they open their first flowers in the middle of June right on into November, according to the state of the weather, of course. I have grown the varieties named below, and am much pleased with their behaviour. Quite the best way to grow this type of Rose would be as a hedge, allowing them to ramble away at will, occasionally removing weak growths to make room for the stout, sucker-like shoots that are being constantly pushed up from the main branches. The perfume in all of the varieties is most pleasing.

Trier produces large, pyramidal panicles of white flowers tinged with pink on opening, and with decided yellow anthers

Kommerzienrat W. Rautenstrauch (Lambert, 1910) is a strong-growing sort with very few thorns and good foliage. Its panicles of salmon red, with light yellow centre and a white shading on



THE JAPANESE CRAB APPLE, *PYRUS FLORIBUNDA*. THIS HAS CHARMING PINK FLOWERS THAT OPEN IN MAY.

of the blooms will be dealt with in the next article.

P. L. GODDARD.

PERPETUAL-FLOWERING CLIMBING ROSES.

ALTHOUGH we often hear of perpetual-flowering climbing Roses, I find them most difficult to locate. An odd bloom or two will at times open on certain plants through some check to growth, but such instances cannot class the varieties as perpetual flowering. I need hardly say I am not alluding to the many forms of Hybrid Tea Roses that really do go on flowering long into the autumn, like Lady Pirrie, for example; but I mean real climbing varieties like American Pillar or Excelsa, or even Félicité Perpétue.

By the introduction of Trier in 1904 Herr Lambert gave us the foundation of a perpetual race of

the outside of the petals, are produced over a long period. This variety is exquisitely perfumed.

Thermidor grows vigorously, throwing up strong flower-stems with huge panicles of extra large blooms, pale yellow, changing to white with age.

Hugo Maweroff produces its warm carmine, small double flowers of regular form in elegant trusses.

Fairy (W. Paul) is, unfortunately, of weak growth, therefore requiring much time to fill a given space, although this may be due to its great freedom in flowering. The single flowers are snow white, with yellow anthers.

Francois Juranville, although belonging to the wichuraiana section, is the most perpetual flowering of any variety in that section, but not so much so as the multiflora type. It is so useful for the continuance of its interestingly coloured flowers—bright salmon pink, base of petals orange yellow—that it deserves extended culture. E. M.

"THE GARDEN"

COMPETITION FOR PLANNING AND PLANTING THE LITTLE GARDEN.

FOR every great garden planned on spacious lines and expensively planted, there are a thousand little gardens which deserve no less thought and invention if they are to give their owners all the pleasure to be won from the happiest of recreations—gardening. Not so many years ago the little garden, whether in town or suburb, or even deep in the country, was a thoughtless affair; a few beds of Geraniums and Roses, a border of annuals and perennials in small and dull variety, and perhaps a shrubbery, all laid out without reference to the house or to each other. Since then, the cultivation of flowers and shrubs, fruit and vegetables has developed at a great speed. And it has done this side by side with a growing attention to the sister art of garden design, which includes not only the laying out of ground on simple and artistic lines, but also the use of flowers in harmonious groupings.

All this has been well understood and practised in the greater gardens, where an increasing reliance is set on those more formal qualities which made the beauty of the Old English garden. It remains to show that the little garden is no less capable of beautiful treatment. The miniature can be as great a work of art as the full-length portrait.

VALUABLE PRIZES FOR BEST DESIGNS.

The Proprietors of *THE GARDEN*, anxious as they are to stimulate the best interests of gardening in all its aspects, and to encourage correctness of design and planting in all sorts of gardens, have organised the competition of which particulars are now given.

Four Typical Sites have been chosen, and their plans are now reproduced on a small scale.

No. 1 shows a level site with a narrow frontage of 40 feet and a total depth of 120 feet. This is an average small suburban plot, and its lay-out and planting has an importance not ordinarily recognised.

No. 2 shows the type of garden which results when an enthusiastic gardener, living next door to a man who cares for none of these things, buys or rents part of his neighbour's garden. The L-shaped plot thus secured gives opportunity for variation in design which is impossible on a narrow rectangular plot. The site is level.

No. 3 shows a site such as is often found in the more distant suburbs of large towns, and even in the heart of the country, where there is a wide frontage and much less depth in proportion. This shape creates a new set of problems for the designer. The site slopes 3 feet downwards from east to west.

No. 4 shows a corner site formed by two converging roads, and its irregularity gives opportunity for unusual treatment. This site has a slope of 5 feet downwards from north to south.

RULES OF COMPETITION.

A Tennis Lawn is not to be attempted on Nos. 1 and 2; it may be, but need not be provided on No. 3; it must be included on No. 4.

Paving for paths, &c., should be shown where it is proposed to use it, but its cost should be remembered.

Frames or Greenhouse.—Place for two frames in No. 1 site, four in No. 2; and for unheated greenhouses in Nos. 3 and 4 may be, but need not be provided. If they are provided, due thought must be given to their being suitably screened from view from the house.

Architectural Features.—A sunk plat, a garden-house, a small pool, a pergola, treillage screens, seats, sundials, statues, &c., are permissible, but should be moderately used. Competitors should assume that the garden-owners have the following sums to spend, to cover cost of such things as frames or greenhouse and architectural features, also of hedges or trees which are to form salient features of the garden design, but exclusive of planting flowers, sowing lawn, &c.: For No. 1, £20; for No. 2, £40; for No. 3, £60; for No. 4, £100.

Treatment of Garden.—Competitors will use their discretion as to what proportions of the sites shall be utilised for flowers, fruit, vegetables, &c., but should bear in mind the average garden-lover rather than the specialist in one sort of cultivation.

Conditions of Entry.—The competition is open to anyone who cuts out the form of application on page IV. and posts it with four penny stamps to the Editor of *THE GARDEN*. (The envelope must be marked "Garden Competition.") This charge is to cover the actual cost of printing and posting two sheets giving the outline plans of the four sites. On these sheets the designs are to be drawn. Competitors may submit designs for all or only one of the four types. They will also be required to prepare (on a blank sheet, which will also be supplied) two planting plans, one for a bed or group of beds, and one for a border. It is left to the competitors' discretion whether they provide Roses, annuals or perennials. Bedding-out plants are discouraged but not barred. These plans are to be prepared in the way that Miss Jekyll has popularised. An example, which shows the method of drawing and size of lettering, is printed on one of the site sheets for the guidance of competitors. On the third blank sheet a bird's-eye view or perspective view of the garden may also be drawn if competitor desires. All notes and descriptions are to be printed on the drawings in bold and simple lettering, so that it can be read when reduced to a small scale. All drawing is to be done in black ink. The use of pencil or colour will disqualify, but perspectives may be wash drawings. The site sheets will be sent out to competitors rolled in a cardboard tube, *in which they are to be returned*. Drawings cannot be considered if they are returned folded. In order that anonymity

may be preserved, all competitors will receive with the site sheets a form on which they will give their name and address, and an envelope in which the form is to be enclosed. The drawings and sealed envelopes will be numbered at *THE GARDEN* Office on receipt, and the envelopes will not be opened until after the awards have been made. Where one competitor is especially interested in planning and another in planting, they may combine to send in a joint scheme.

Enquiries as to the Conditions.—Any competitor who does not fully understand the conditions of the competition should write an enquiry to the Editor of *THE GARDEN* on or before June 6. All such enquiries will be answered in the issue of *THE GARDEN* of June 20, 1914.

Date of Sending In.—All drawings are to be addressed to the Editor of *THE GARDEN*, 20, Tavistock Street, Covent Garden, London, W.C., marked "Garden Competition," and to be delivered on or before September 1, 1914.

Ownership and Return of Drawings.—The Proprietors of *THE GARDEN* reserve the right to publish any drawings submitted in any form they may wish. The winning designs and any others of special interest will be reproduced with the names and addresses of their authors in a special issue of *THE GARDEN*, which will be published as soon as possible after the judges have made their awards. All designs that secure prizes will become the sole property of the Proprietors of *THE GARDEN*, and copyright of the same will be strictly reserved. All drawings that do not receive prizes will be returned if sufficient stamps are enclosed in the envelope containing competitor's name. Great care will be taken of all drawings submitted, but the Proprietors of *THE GARDEN* will not be responsible for the loss of or damage to any drawing, howsoever arising.

Prizes Offered by "The Garden."—A first prize of 5 guineas, a second prize of 2 guineas and a third prize of 1 guinea will be given to the three best designs sent in for each of the four types, *i.e.*, there will be twelve money prizes in all, totalling £33 12s. In addition, there will be twenty consolation prizes, each consisting of books to the value of 10s. 6d., to be chosen by prize-winners from the *Country Life* Library of Gardening.

Judges.—The following gentlemen have kindly consented to examine the designs sent in and to make the awards: Mr. George Dillistone, Mr. F. W. Harvey (Editor of *THE GARDEN*), Mr. P. Morley Horder, F.R.I.B.A., Mr. Lawrence Weaver, Hon. A.R.I.B.A. (Architectural Editor of *Country Life*), and Mr. S. T. Wright (Superintendent of the Royal Horticultural Society's Gardens at Wisley). *The awards of the judges will be final and binding, and will not be subject to any appeal.* The Editor of *THE GARDEN* will not publish any correspondence relating to the awards unless it appears, in his sole discretion, to be of public interest.

DAFFODIL NOTES.

THE MIDLAND DAFFODIL SOCIETY'S SHOW, 1914.

A SHOW has been held at Birmingham without Robert Sydenham. This is the supreme fact to chronicle with regard to the 1914 exhibition. It is this which differentiates it from all others, for necessarily to a very large extent the flowers were the same, and necessarily, too, the general staging arrangements featured those of previous years; but no large-crowned, soft, fawn-coloured hat bobbing in and out among the crowd—here, there, everywhere! This was not there, and all that that hat stood upon. From the first Daffodil show organised by the late Professor Hillhouse in 1893 down to that of 1913 that hat had never been absent. No wonder, then, that we had come to look upon it as a something without which a show could not be. We were right and we were wrong. We have had a show, as we will have to have all our others, without it, and yet neither this nor those future ones which we hope for would, humanly speaking, have been possible without the life which he gave to the society and the painstaking toil and watchfulness with which he nourished its tender years. Lest we forget, "Robert Sydenham, Founder," is now an integral part of our official title. It is our formal tribute to his memory.

A remarkable event happened on the morning of the second day—our "silent salesman" spoke. Standing by me in front of the two classes of three distinct varieties of seedling Daffodils that have been raised by the exhibitor—Class 30 for old hands and Class 31 for novices—he pointed to the seventeen little lots that were staged in competition and said, "This is what I like to see." As these words fell from his lips I thought within myself, "And no one has done more than you to bring it about."

No parcel post firm of traders ever issued a catalogue of more alluring fascination than the splendid exhibits of Mr. Ernest Crosfield. The large, striking and refined blooms of which they are always composed are a tremendous stimulus to those who are just beginning to taste the sweets of home-made flowers. What an inspiration to stand before his tricolour-eyed Poet Ring Dove and observe the wonderful texture and substance of its beautiful round perianth, and note the green and yellow and red of its well-proportioned eye! How the large, cool-looking Barrii Anchorite fascinates us with its long segmented marble white perianth and its flat, large, lemon eye! What wonders of cultivation did we not see revealed in that peerless "nonsuch" Aladdin in the single bloom class for white-perianthed incomparables. It is $4\frac{1}{2}$ inches

from tip to tip. It has a little trumpet $1\frac{3}{8}$ inches long and $1\frac{1}{2}$ inches wide at the top, of a pleasing shade of yellow. Its petals are as smooth as a well-ironed shirt. The wider ones are $1\frac{3}{4}$ inches across and $1\frac{7}{8}$ inches long. I am told that this type is one which is hard to breed, but all this is forgotten as we go away, inwardly resolving to try if we can some day to be as fortunate as Engleheart was when he gave the world this magnificent beauty.

I know one young seedling-raiser who must have felt very pleased with himself at Birmingham (and his wife, too, for she was by his side, as she always is, helping with the Daffodils). I refer to Dr. Lower of Presteign. Had not his 234



THE POET NARCISSUS RING DOVE, RAISED BY MR. E. CROSFIELD.

the largest and deepest red cup in all the exhibition? The ivory-coloured perianth was slightly reflexed, and measured $3\frac{1}{4}$ inches in diameter. Placed on this and taking a round inch of its space was the deep orange red corona bordered with a narrow ribbon of the deepest Poeticus red. "A topping flower," said one, "to give colour to a big thing like Bernardino"; but, alas! the anthers are at present sterile and contain no pollen. I am given to understand that this may not always be the case, and that the keen doctor may live in hope. A beautiful double named Mary Copeland gives us the present high-water mark in this class. Not even Llinos, which I described last week as being the feature of the

London Show, has such a good back or such well-formed and symmetrical guard petals as this. There are two rows of them, broad and well proportioned, of a very pale primrose shade, next door to white. The interior is filled with the split-up corona, each little bit being of a deep yellow, broadly edged with orange red. It is a flower of no mean size, measuring, if my memory serves me, 4 inches across. It is a curious coincidence that two doubles of quite a new build, and each one very similar to the other, should have suddenly appeared in two consecutive weeks at the two great shows of the year.

Although I greatly admire the beautiful white Ajax from Holland, Mrs. E. H. Krelage, with its

white, well-formed perianth and its all but pure white trumpet—size: $4\frac{1}{4}$ inches \times ($1\frac{3}{8}$ inches \times $1\frac{3}{4}$ inches) \times ($1\frac{3}{8}$ inches \times $1\frac{3}{8}$ inches); although I liked the shape and colour of Mr. Welchman's rich golden yellow trumpet The Commonwealth—4 inches \times ($1\frac{1}{4}$ inches \times $1\frac{1}{2}$ inches) \times ($1\frac{1}{4}$ inches \times $1\frac{1}{2}$ inches) very much indeed; although I was charmed with the refinement of the pale Barrii Whisper ($3\frac{1}{4}$ inches \times $1\frac{1}{8}$ inches), with its pale citron cup and greenish eye; although the green in the Poet Raeburn's eye was so pronounced as to give the flower its great distinguishing characteristic; although I could say much of Sentry (a red-eyed Frank Miles), of Wilson's flat-eyed 672, of Charles Surface, of the clear-cut bicolor Ajax Mystery, of Madrigal (the pure-bred Poet that looks like a Barrii), of Allan-a-Dale (the wire-eyed Poet from Rye), of the recurvus-like Sonata, of the many beauties on the gold medal stand of Messrs. Barr and Sons, I must pass them by with this cursory notice in order to write more fully of what was to me the cynosure of the whole show, if for the moment I exclude from my purview the exceptional exhibit of Mr. Engleheart. I think it is Milton who writes of the "cynosure of neighbouring eyes." That was what Melanie was at Birmingham. A lady quite unknown by name or sight to me stood before it as I was making some notes, and touched my arm as if she had to have some outlet for her feelings, and said, "It is worth living to produce

a flower like that." The whole flower is a dead white, only relieved by the green eye of the cup. The three outer petals are broad and flat, while the three inner ones had slightly recurved edges. The bloom as a whole may be described as circular and not very large, being only $2\frac{1}{2}$ inches in diameter. It is a great achievement to have produced such a bloom, and I heartily congratulate Mr. A. M. Wilson on being the fortunate man to do it. Melanie, White Knight and a small yellow "peerless" raised by Mr. J. C. Williams I put in a class by themselves as super-refined, or possibly a better name would be superfine.

One charm of Birmingham is the quiet of the second morning of the show, when the keen ones

have the whole conservatory practically to themselves, and when one can take notes in space and peace and really look at things. I spent a considerable portion of the time at my disposal studying Mr. Engleheart's exhibit. I was attracted by the many pure white varieties which he had staged. They were collectively probably the best, largest and most varied collection that has ever been shown at one time. My good friend, the raiser, was kind enough to come and talk to me about them. I think he agreed with me in putting a long-petalled flower marked W—52 down as the greatest novelty. It measured $3\frac{1}{2}$ inches in diameter, and had a shallow cup seven-eighths of an inch across, which was pure white, while the perianth was a very pronounced shade of pale sea green, which appeared somewhat deeper in tone on the second day than on the first. When the two blooms were held against the pure white ones, the difference was very marked. W—128 (size: 4 inches \times $1\frac{1}{2}$ inches) is a large bloom, reminding one, in its cup more especially, of White Lady. The white segments are long and rather narrow, making between them a typical double-triangled perianth. W—153 (size: $2\frac{1}{2}$ inches \times seven-eighths of an inch) was an exact opposite. It was pure white, too, but there the resemblance ended. The petals were small, rounded, and with that delightful concavity which we describe as shell-shaped, and which I can recall in old days as giving much of its charm to the pretty Vanessa. The eye of the cup is a distinct grey-green, quite away from such a shade as we get in Emerald Eye. There were, too, on Mr. Engleheart's stand a whole series of a new type of Poet which suddenly appeared among his seedlings. To the casual onlooker they appear much the same as others, say, Raeburn; but as the faithful shepherd knows each sheep and can distinguish them all, so to the trained eye of the raiser these are very distinct, and constitute a new race. They are round in shape, have large, protruding anthers, thin, wiry stems, and have much green in the eye. He has a whole series of these, which he ranged side by side for my inspection. I think now I could pick them out; but what about it in a year? I shall see them no more till then, for the end of show-time has come. Good-bye, flowers! May you be there to be seen, and I to chronicle your charms in twelve months' time!

JOSEPH JACOB.

WATSONIA ALBA OR ARDERNEL.

This was introduced a few years ago by Mr. Arderne of Cape Town. In height it grows about four feet, bearing long, branching spikes of white flowers. When seen growing in a colony with a groundwork of low-growing plants, a beautiful effect is the result.

DAFFODILS NOT FLOWERING: CAUSE AND REMEDY.

[In Reply to Several Correspondents.]

SO many of our readers have this season been complaining of their flowerless Daffodils that we think it well to endeavour to clear the air in the matter—in other words, to give examples of cause and remedy. The bulbs in not a few instances are those of strong-growing garden varieties, which good cultivation and a favourable growing season should make all right. By "favour-



A HANDSOME TRUSS OF RHODODENDRON LODERI PINK DIAMOND.
(See page 248.)

able growing season" is intended that period of genial weather with frequent or abundant rains in March and April, when the Daffodil, developing its leaf growth, is also endeavouring to form a bulb which will be almost sure to give a perfectly satisfactory flowering in the year to come. For it should be known—is, indeed, known—to a very large number that the germ of the flowering we have recently enjoyed was really laid, *i.e.*, formed and existed in embryo, nearly a year ago. Hence much depends upon a genial springtime, the absence of cold, parching winds, for so moisture-loving a plant as the Daffodil.

But many will say: "We are at the mercy of the weather!" Exactly, and that is

where intelligent and generous cultivation to a large extent supplies the deficiency, should it exist. Another important item is early—August and September—planting, in order that root development may follow in season and in reason. Late planting is a prolific cause of failure, not of flowering, but of that good bulb growth which ensures success another year.

As already stated, the flowers that have been enjoyed during the past weeks were formed nearly a year ago, and where good cultivation obtained, not much has been wrong. The disappointments experienced during the same period have been in some measure due to the exceptionally dry spring of 1913; they have been far greater in the lighter soils and where good or generous treatment never entered into the scheme of cultivation.

Another prolific source of failure is caused by the amateur lifting and transplanting his bulbs in flower or leaf time; it is accelerated in those instances—and they are not infrequent—where the bulbs are lifted in clumps and transplanted in a similar way. One correspondent complains of the non-flowering of his Daffodils "this year and last year." They have been planted "four years, the leaves quite healthy." The only remedy in such a case is lifting, dividing and transplanting, with free room for development subsequently. Lift in July; replant a month or so later. Trench the ground deeply, just as the soil permits.

Manure liberally low down, *i.e.*, 6 inches below the bulbs. Do not forget a change of soil; nothing is so beneficial. Do not expect flowers immediately where there has been none for at least two years; at least a year's bulb development will be needed to achieve this.

THE GARLAND-FLOWER.

DAPHNE CNEORUM, otherwise known as the Garland-Flower, is one of the most charming of dwarf flowering shrubs, and an excellent plant for a shelf in the

rock garden. Growing only about six inches high, it spreads by means of sucker growths into a wide mass, which, throughout the year, retains its small, narrow leaves, and during late April and early May is a mass of pretty pink, fragrant blossoms. The flowers are borne in terminal heads $1\frac{1}{2}$ inches to 2 inches across, almost every shoot being crowned with flowers at the time named. Unfortunately, it is not everyone's plant, though in many places it grows like a weed. It appears to enjoy moist conditions at the roots, and thrives either in light loam or a peaty soil. Propagation is often carried out by dividing the clumps, each division with a little root forming in time, a distinct plant.

SEASONABLE NOTES ON VEGETABLES.

Cabbage.—The plants raised in boxes from seed sown in March will now be ready for planting out on heavily manured land in rows 18 inches apart, the plants 9 inches apart for the small-growing varieties which heart quickly, cutting out early every alternate head. When planted, cover the ground close up to the stem and for 3 inches wide with finely sifted coal-ashes, as a preventive of slugs eating the plants. Keep the ground well stirred among established plants, as this hastens growth; and if any batch seems slow of growth, sprinkle around each plant a pinch of nitrate of soda.

Carrots in Frames.—The latest-sown batch will need thinning and careful ventilation, tilting the lights on the opposite side to that from which the wind is blowing; water well, but carefully. Outside, sow small breadths of horn varieties for pulling in a young state. The earlier sowings will need thinning, stirring the soil between the rows.

Cauliflowers.—Make sowings of Mammoth, Autumn Giant and Magnum Bonum in frames, where the plants can be more safely raised than out of doors in dry weather. Directly the plants show through the soil, remove the lights and give an occasional dusting of soot and wood-ashes, which induces stocky and vigorous growth. If there is any danger of the plants being too thick, thin them carefully at an early stage, thereby obtaining sturdy seedlings. Plant out in drills those of previous sowings. In this way watering is more beneficial, as the roots derive the full benefit from the soaking.

Celery.—The February-sown plants that have been grown on in pots or beds in frames should be put out in trenches for an early supply. If an extra early crop is required, plant in frames or on a spent hotbed, giving abundance of water. Except for an early show, this crop is hardly wanted. The trenches for the first outside crop need not be made deep, as the variety will be of the dwarf section.

Peas.—Continue to sow Peas of the Marrowfat type at fortnightly intervals. Should the soil be dry, well soak the drills an hour before sowing, which will hasten germination of the seed. Directly the plants from any previous sowing appear above the ground, place black cotton over the rows as a preventive of birds. The rows, 4 inches high, should be earthed up, and have short stakes placed on each side prior to adding the taller supports. When the latter are put in, they should be placed upright. So many give them an inward slant on both sides, causing the tops to come so close together that the haulm there

receives no support, but is forced outwards on both sides, and in case of continued rains falls down through lack of support. If there is a promise of drought—as there is in May very often—mulch both sides of the rows with half-decayed stable manure as a preventive of the evaporation of moisture, which is a most certain forerunner of a mildew attack. The conserving of the moisture in the soil, too, assists freedom of growth. Early sown varieties for show, like Alderman, Duke of Albany or Quite Content, that are showing pods sufficiently for a crop, should have their points removed to conserve the energy of the plant into the swelling of the pods. Such plants should be freely supplied with



THE NEW REGELIO-CYCLUS IRIS LEUCOTHÆA. THIS HAS VIOLET BLUE SHADED BROWN FLOWERS.

water, and be lightly syringed in the afternoon of a hot day.

Tomatoes for Outdoors should now be planted against walls and fences. A southern aspect is the best site, although they succeed admirably on an east wall. The plants should be not less than 1 foot high when put out, and if they have been growing in 6-inch pots in a cold frame they will be all the better, as they will grow away at once and set fruit early, which much facilitates ripening in September. The soil should not be too rich, as the plants can be fed with liquid stimulants later on when the fruit is set and making the first swelling.

Swanmore.

E. MOLYNEUX.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Rhododendron Loderi Diamond.—A stainless, white-flowered hybrid of much excellence. The flowers are produced in loosely formed clusters.

Rhododendron Loderi Pink Diamond.—A counterpart of the above, with delicately shaded, pink-coloured flowers. These are obviously hybrids of the Aucklandii set, and have the same finely fashioned open, bell-shaped blossoms, which are about five inches across. No praise is too great for them. Exhibited by Sir Edmund Loder, Bt., Horsham.

AWARDS OF MERIT.

Rhododendron Gill's Goliath. A glorious rose pink flowered sort, with splendid heads of open, bell-shaped flowers. The richer colour is seen in the upper part of the flower; lower down the tube it is of lighter hue, veined pink on a whitish ground. Shown by Messrs. R. Gill and Son, Falmouth.

Iris Isolda (Regelio-Cyclus).—This delightful flower in bronze and gold approximates to the lovely, and until now unique, Charon. It is, however, of darker bronze, and possibly also larger-flowered. A gem of the first water.

Iris Leucothæa (Regelio-Cyclus).—A handsome form having violet blue standards, the bluish falls reticulated with grey and blotched with brownish crimson. It is very fine. These were shown by M. C. G. van Tubergen, Holland.

Syringa reflexa.—This distinct species is marked by unusually large leaves and racemes of lilac-coloured flowers, horizontally disposed. From the Hon. Vicary Gibbs, Elstree.

Auricula Majestic.—A very handsome self red, with yellow paste or centre. The pip is of large size; the truss finely proportioned. From Messrs. J. Veitch and Sons, also from Messrs. Phillips and Taylor, Bracknell.

NEW FRUIT.

Apple Sandling Duchess.—A very late cooking variety of excellent quality. Mr. S. T. Wright tested the fruits at Wisley, and reported that the cooking quality was equal to the favourite variety Wellington. The fruits are rich red and of moderate size. An award of merit was granted subject to an official inspection of the tree in the autumn. Shown by Mr. W. Crump, V.M.H. We heard many complaints about the fruits being removed before Fellows could see them.

The foregoing awards were made at the fortnightly meeting of the Royal Horticultural Society on May 5, when the flowers and fruit named were shown before the respective committees.

GARDENING FOR BEGINNERS.

RAISING SINGLE WALLFLOWERS FROM SEEDS.

AMONG spring-flowering plants, the Wallflower is one of the most useful and pleasing. In addition to the beautiful rich colours of the flowers, they are delightfully fragrant. No frame or greenhouse is necessary to raise Wallflowers from seeds. Sow them on a spare piece of ground during May and June or in shallow boxes, which may be stood in a light yet sheltered position outside. The best method is to sow Wallflower seeds in shallow drills 1 foot apart, as shown in the illustration. Having raked the surface soil to a fine tilth, draw out the soil from the drills to a depth of 1 inch to 1½ inches. Sow the seeds thinly, and fill in the drills. A sprinkling of lime and soot over the ground will assist in keeping away slugs and snails from the tiny seedlings.

Some time during July, according to whether the seeds were sown early or late, the seedlings will be ready to transplant. As a rule, the positions where the plants are to blossom are not vacant till autumn, so recourse must be had to another

piece of vacant ground. Tread this firmly, as it is very desirable to transplant Wallflowers in autumn with good balls of soil. Set out the young plants in rows 1 foot apart, and 9 inches from plant to plant in the rows.

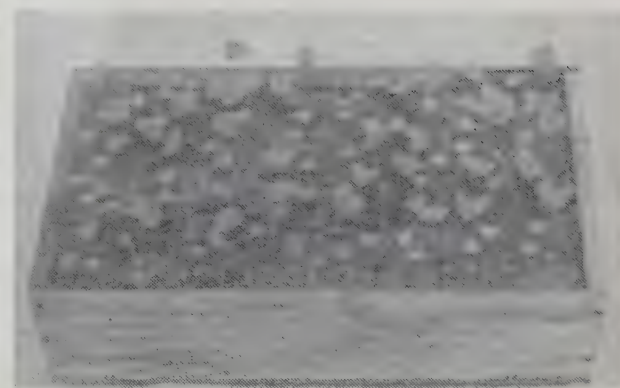
There are two methods of increasing Daisies—by dividing up the clumps after flowering, as illustrated, and by seeds. Dividing or parting the clumps is done after flowering, usually in June. Each rosette of leaves or single growth, if carefully severed from the parent plant, usually has a few roots attached, and will quickly make a new plant. For a bed of young Daisy plants select, if possible, a piece of ground shaded from the midday sun. Set them out 6 inches apart and 9 inches between the rows. Here they may remain till the summer flowers are over in late autumn, when the plants can be transplanted with nice balls of soil to beds and borders. Instead of using Daisy plants as permanent edgings, numerous growers take up the plants after flowering and grow them in the reserve garden till the autumn, thus making room for Lobelia, Sweet Alyssum and other dwarf summer-flowering subjects. Three popular double Daisies are Snowball (white), Alice (pink) and Rob Roy (crimson).

Seeds of double Daisies may be sown during May and June on a border outside or in boxes in a cold frame. In due course, when large enough, prick out a patch or two of the seedlings 3 inches apart on vacant ground, where they will grow till the autumn. A good strain of seedling Daisies may be expected to come very largely true to colour. As a rule, the seeds are sold in colours, as double white, crimson or pink. Named sorts from seed are Longfellow (dark rosy pink), Snowball (white)

and Firefly (glowing scarlet, with yellow centre). The most notable development in seedling double Daisies in recent years is the Giant strain. These plants produce flowers 2 inches or more in diameter, by the side of which the ordinary strains appear almost as pygmies. Seeds of Giant White and Giant Pink may be purchased separately, or, if desired, a packet of Giant Mixed supplies a variety of shades from pure white to rosy red. It is worth while selecting a few of the very best seedlings and propagating them by division.

HOLLYHOCKS FROM SEEDS.

FORMERLY it was the practice to propagate Hollyhocks by division, grafting or cuttings, but the deadly fungus created so much havoc among the named sorts that the great majority of Hollyhocks grown in our gardens are now raised from seeds. These plants, having plenty of vigour, are less susceptible to the fungus. To secure strong plants for flowering next summer, seeds of single and double flowered Hollyhocks should be sown during May or June. Sow either in the open ground or in a cold frame. In due course prick off the seedlings in shallow boxes, as illustrated, and later



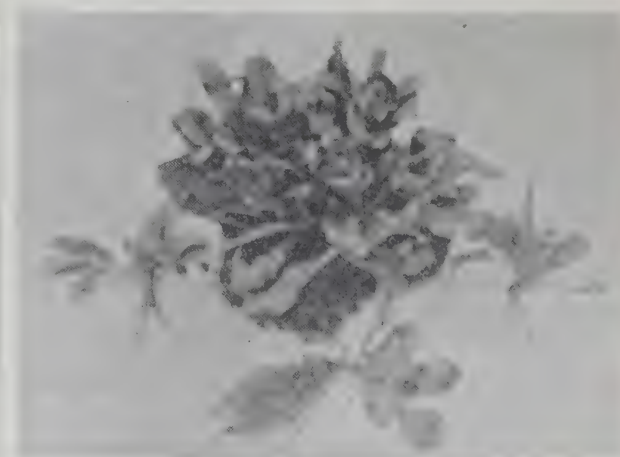
SEEDLING HOLLYHOCKS SHOULD BE PRICKED OFF INTO BOXES WHEN LARGE ENOUGH, AND TRANSFERRED LATER TO THE OPEN GARDEN.

plant them out in the open border. Seedling Hollyhocks may be raised in many pleasing shades of colour, including crimson, red, deep rose, pink, orange yellow, sulphur, and white. Hollyhocks vary from 6 feet to 10 feet in height, and flower from June to September.

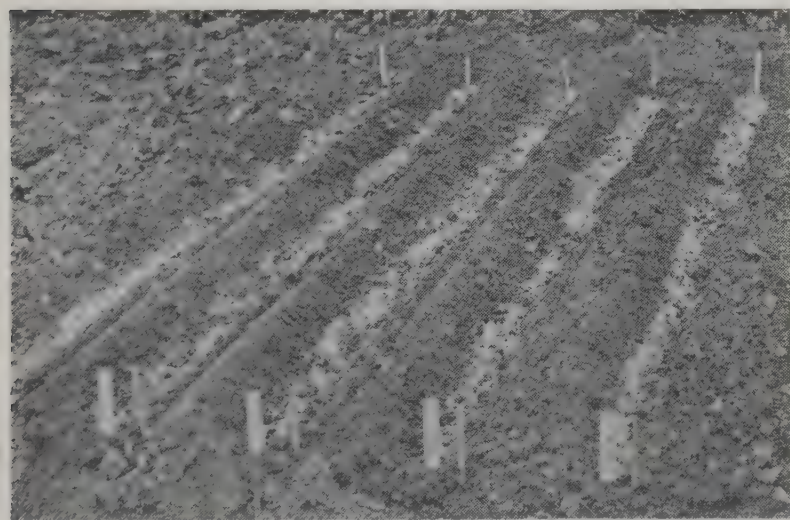
ALPINE STRAWBERRIES.

BEING both hardy and adaptable, the alpine Strawberry can be grown in any garden, and will fruit freely the whole of the summer. Although birds play havoc with most other small fruits, they seldom interfere with this particular variety. Keep down weeds by hoeing whenever the necessity occurs, and mulch directly the blooms appear. If dry weather is encountered after the flowers begin to set, watering should be done until the conditions alter, otherwise the fruit will be small. A light dressing of nitrate or some other well-known fertiliser applied a month after starting to pick the fruit will do much to encourage continuous bearing. Keep the weeds well down all the year round and also keep the runners cut. The beds will stand for many years so long as the rooting weeds do not get established. Alpine Strawberries possess a quite different flavour to the ordinary Strawberries. They will, too, stand handling much better. Jam may be made from them. They are delicious with cream, and make an appetising stew. One great virtue is that they are certain croppers.

J. T. B.



DOUBLE DAISIES MAY BE PROPAGATED BY DIVISION, AS SHOWN, AFTER THEY HAVE FINISHED FLOWERING.



DRILLS MADE READY FOR SOWING WALLFLOWER SEED. NOW IS THE TIME TO DO THE WORK.

piece of vacant ground. Tread this firmly, as it is very desirable to transplant Wallflowers in autumn with good balls of soil. Set out the young plants in rows 1 foot apart, and 9 inches from plant to plant in the rows.

Wallflowers will grow in most garden soils. There are many positions for them in beds and groups, lines or whole borders; vacant spaces between shrubs may be filled with Wallflowers; while for window-boxes and terrace vases they are the best of all spring flowers. Wallflower plants, when in flower, are from 9 inches to 18 inches in height. Among numerous named sorts which come quite true from seeds, the following comprise a useful selection: Cloth of Gold, rich golden yellow; Blood Red; Vulcan, rich dark crimson, dwarf habit; Faerie Queen (Primrose Dame), citron yellow; Purple Queen (Violet Queen); Eastern Queen, salmon and rosy pink; Fire King, orange red; Ivory White and Yellow Phoenix.

PROPAGATING DOUBLE DAISIES.

As an edging for beds and borders in spring, double Daisies are among the gayest of low-growing plants at that season. With their tufted growths

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Melons.—As soon as the first batch of Melons are cut, the house should be thoroughly cleaned and preparation made for another plantation, and as the season advances a greater depth of soil ought to be provided in order to reduce the need of frequent watering. Melons may be planted from now to the beginning of August in numbers, according to the demand. Until the fruits are well advanced in each case the plants may be syringed twice daily, providing a temperature of 75° is maintained at night.

Cucumbers.—Frequent thinning and stopping will be necessary to keep the plants from becoming crowded. Give frequent waterings of liquid manure, and top-dress the bed as often as the roots appear through the surface of the soil. Rich loam and decayed manure will answer the purpose well.

Plants Under Glass.

Richardias or Arum Lilies which have finished flowering may be removed to the open air and moisture gradually reduced, in order to prepare the roots for potting about the end of July. Some growers plant them out; but where early flowers are desired, the best way is to grow the plants in pots, potting them up about the end of July or August and protecting them from heavy rain until the roots have made good progress.

Chrysanthemums.—Plants intended to produce large flowers should now be ready for their final potting. The compost may consist of good, rich loam, leaf-soil and decayed horse-manure. Pot firmly and leave some space for top-dressing later in the season. Fine sifted lime rubble should be mixed with the soil to keep it in a porous condition. Cuttings may now be inserted in small pots, in order to produce stocky plants for furnishing in November and December.

Verbena Miss Willmott.—This beautiful Verbena is suitable for the conservatory as well as for the flower garden. Plants rooted in March should now be ready for potting into 5-inch pots. A mixture of rich loam, leaf-soil and a little decayed cow-manure and silver sand will suit them well. Grow in a temperature of 55° and avoid cold draughts.

The Flower Garden.

Border Chrysanthemums.—Spring-struck cuttings should be planted out before they become pot-bound and stunted. Besides planting these on the mixed border, a plantation ought to be made on a break by themselves, especially if large quantities of cut flowers are desired during the autumn. Only early flowering varieties should be planted for this purpose, and they ought to be allowed a space of 2 feet from plant to plant.

Climbing Plants.—These soon become entangled if not regularly attended to and the shoots thinned and tied in the right direction. Many of the climbing varieties of Roses make far too much growth, and unless these are thinned out and trained, they will become a mass of rubbish. Clematises also require attention at least every ten days during the early part of the season.

The Rose Garden.—Careful attention must be paid to the destruction of aphids, which is almost sure to appear after cold east wind. Syringe the trees carefully with some approved insecticide, and see that they do not suffer from want of water at the roots. Roses which were planted recently should be carefully mulched with decayed manure, and if dry weather continues, a good watering ought to be given after mulching.

May-Flowering Tulips which are at present occupying the flower-beds may have to be lifted before they are quite ripe, and if such is the case, they should be carefully labelled and placed in the reserve garden until the bulbs are ripe, when they may be lifted and placed in the store-room until the time arrives for planting.

The Hardy Fruit Garden.

Watering.—In consequence of the unusual drought in April and early May, it will be advisable to examine the borders to ascertain if water is necessary. In the case of recently planted

trees, it is almost sure to be required, and this should be applied in sufficient quantity to thoroughly moisten the soil. If the borders were mulched, this will have done much to retain the moisture in the soil; but even then it may be necessary to give a thorough watering at once. Apricot trees which are necessarily planted in porous soil are generally the first to suffer, and if once allowed to become too dry at the roots, no amount of care afterwards will restore them to a healthy condition. All fruit trees in exposed positions should receive attention at once.

Gooseberry Trees.—Now is the time to guard against caterpillar. Let the trees be thoroughly syringed with some insecticide as soon as this pest makes its appearance. A dusting of soot and lime early in the season will do much to keep the trees free from this and other pests.

The Kitchen Garden.

Early Cauliflower.—Recently planted Cauliflower will require special attention. Weak liquid manure may be applied twice during the week, taking care to moisten the ball of soil thoroughly. Spring-sown plants for succession should be planted on well-prepared soil as soon as large enough to handle. These will require careful attention and protection from slugs, but will repay the cultivator if properly attended to.

Lettuce.—Spring-sown plants should now be ready for thinning and transplanting. Sprinkle the plants night and morning until they become re-established. Slugs may be kept in check by dusting the border with lime in the early morning. Make fortnightly sowings from now to the end of July, and, as the season advances, a cool situation should be chosen for them.

Brussels Sprouts.—Let these be planted out as soon as large enough, allowing 3 feet between the rows and 2 feet from plant to plant. The soil for this crop should be of a rather stiff nature and not too rich.

Radishes.—Make frequent small sowings of Radishes, choosing a position which is not too hot and allowing plenty of water.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Swede Turnips.—Every garden should have a number of rows (according to requirements) of this excellent winter vegetable. Unlike the ordinary garden Turnip, Swedes require a much richer soil and plenty of room to develop the roots. The present is a very suitable time to make a sowing, provided the soil is in condition for this, but, of course, they may be sown any time up to the beginning of June.

Globe Artichokes.—The protecting material may either be forked in or cleared away, and if the soil is at all dry, they will be greatly assisted by occasional waterings with weak liquid manure from the byre. Where extra large heads are in demand, the small ones that appear on the sides of the stalk should be removed, going over them several times.

Late Varieties of Peas.—As this sowing has usually to withstand the heat and excessive drought of the summer, it will be necessary to make provision accordingly. Dig out some small trenches as for Celery, and place some good farmyard manure in the bottom; then replace the soil. In sowing, place the seed a little deeper than usual, and by all means sow thinly. Indeed, I am not sure that growers would not get better results if the seed were dropped in singly.

Tomatoes.—There is usually a number of plants to spare after the house or frame has been furnished. These should always be planted on some vacant spot against a wall, preferably facing south. The fact that they have been standing about in pots will have tended to throw them into fruitfulness, and these very soon show flower. It is true the fruits may not be so fine as those grown under glass; all the same, the cook will find a use for them.

The Flower Garden.

Wall Climbers.—Too often these are allowed to take care of themselves. They become so intermingled that half their beauty is lost, whereas a little attention at this time in the way of training would amply compensate for the extra trouble. This is particularly necessary with many of the finer Clematises, which give such a glorious display in September.

Portulacas.—These lovely annuals, which are usually treated as half-hardy, may be sown now out of doors where they are intended to flower. They must have a position where they will be exposed to the full glare of the sun, and the soil should be of a light, sandy nature. Any vacant pockets in the rockery would suit them admirably.

Plants Under Glass.

Begonia Gloire de Lorraine.—Plants rooted last month will now be ready for a shift, and for this potting use a compost consisting of good fibrous loam, leaf-soil, sand, a sprinkling of brick rubble and a little dried cow-manure. It is important that they are not potted over-firmly, otherwise the young growths are sure to become stunted and run to flower. After potting, keep them in a warm, moist atmosphere, syringing them two or three times a day. Some of the older plants may be retained and grown on in wire baskets, when, with proper attention, they will make splendid specimens. Indeed, this Begonia is much more effective when grown in this way than in pots.

Gloxinias.—Young plants from seed sown in January will now be ready for potting on. Use soil of a free, open nature, and do not overpot. They will require abundant shade and an atmosphere charged with moisture. Older plants will now be greatly assisted by occasional applications of weak liquid manure from the byre. This will be found to suit them better than artificial manures. When the flowers appear, the plants should have less moisture, and if placed among the Maidenhair Ferns this will make a very tasteful arrangement.

Palms.—Those plants that have done service in the way of furnishing in the mansion will now call for attention. No matter how carefully they have been attended to, they are sure to be showing signs of their uncongenial surroundings. Trim off all decayed points and have every part thoroughly sponged, and before placing them in the Palm-house examine the drainage and top-dress with some turfy loam and a little Clay's Fertilizer. During the next two months they will require a heavy shade and an abundance of moisture. Under this treatment it is really surprising how quickly they recover.

Regal Pelargoniums.—These will now be coming into bloom, and where large specimens are desired, it will be necessary to stake them out. This, however, should not be overdone, as there is nothing more objectionable than any appearance to stiffness. They will require to be fumigated from time to time to ward off green fly.

Crotons.—Tops that were mossed should be potted up without delay. Have them placed in the propagating-case for a few days and shade from bright sunshine. Established plants should be fully exposed to the sun and frequently syringed during fine days. If some stock plants still remain, it will not be too late to root a few for decorative purposes in the autumn. If kept in 3-inch pots, they will be found to be extremely useful for dinner-table decoration. For this purpose they can be turned out of the pots and placed in small silver dishes. Treated in this way they are most effective.

Fruits Under Glass.

Thinning Grapes.—At this season the various varieties of Grapes will be coming on so fast that it will be a matter of concern to cope with the work of thinning. However one is pressed for time, this work should be carefully attended to. Go over the bunches that are thickly set and tie up the shoulders, and begin by cutting out all small and badly placed berries. The final thinning may be done when it can be seen how they are going to swell. The greatest care should be taken not to touch or rub any of the berries, as this would disfigure the bunch.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.
Hopetoun Gardens, South Queensferry, N.B.

SPRING FLOWER BEDS AT BOURNEMOUTH.

It would be very difficult indeed to find any other town in England where flower beds in the public gardens and open spaces are better or more artistically furnished at all seasons of the year than at Bournemouth. The summer effects in this seaside resort we have often seen and admired, but it was not until this year that we had been privileged to see the fine spring effects that the council's head-gardener, Mr. J. B. Stevenson, yearly places before the public.

It was in Queen Victoria's Jubilee year, 1887, that this worthy and highly esteemed gardener first came to Bournemouth in his present capacity, the neighbouring seaside resort, Swanage, having claimed his attention previous to that date. Since then he has seen some wonderful changes in the borough over which he keeps an ever-watchful eye, and it is only fair to add that most of the beautiful gardens and open spaces owe their charm, and in some instances their existence, to his energy, ability and enterprise.

Naturally, spring beds must of necessity contain a great many Tulips, and in using these Mr. Stevenson, by a simple yet ingenious plan, maintains a display of flowers over twice the ordinary period. His method is this: Wherever Tulips are to be used, two varieties of the same colour are selected, one an early sort and the other a May-flowering kind. The bulbs of these are planted fairly closely together and alternately, so that when the early varieties are finished, the later ones take up the running, and continue until it is time to empty the beds ready for the summer occupants.

In the little time that we had at our disposal we made notes of a few of the most effective beds, the date being April 29, and the particulars of these we record herewith for the benefit of our readers. It will be noticed that all the designs are simple, yet the effect of the beds, either in conjunction or alone, was excellent. (1) Munstead Wood Polyanthus, with a broad edging of Aubrietia Dr. Mules, thinly planted over with Tulip Wouwerman, pink, and Royal Crown; (2) Harbinger Wall-flower, with Narcissus Elvira thinly interspersed and boldly edged with double white Arabis; (3) two long beds planted with mixed Polyanthus, edged with double white Daisies



MR. J. B. STEVENSON, HEAD GARDENER TO THE BOURNEMOUTH CORPORATION.

and thinly planted with Tulips President Lincoln and Inglescombe Scarlet; (4) Tulips Prince of Austria and macrospella, planted rather thickly, carpeted with double white Daisies and edged with small-flowered red Daisy Firefly; (5) Tulips Eleanora (purple) and Blushing Bride, carpeted with double white Arabis and edged with Aubrietia Model; (6) Tulips Ophir d'Or and Bouton d'Or, carpeted with Aubrietia Hendersonii and boldly edged with Daisy Giant White; (7) Tulips Yellow Prince and gesneriana lutea, with Aubrietia Dr. Mules, and edged with Daisy Giant White;

(8) Tulips Mrs. Stanley and gesneriana lutea, carpeted with double white Arabis and edged with Aubrietia Model; (9) Pansy Empress, edged with Viola Snow Queen, and planted over with Tulips Pink Beauty and Blushing Bride; (10) Yellow Polyanthus, edged with Daisy Giant Pink, and planted over with Tulips Rosamunde and Picotee.

In addition to the foregoing there were a great many beautiful flower-beds. In the autumn, just before planting-time, we hope to induce Mr. Stevenson, whose portrait we have much pleasure in reproducing herewith, to give our readers the benefit of his long and varied experience in planning and planting spring beds. It may be of interest to record that he is the father of Mr. Thomas Stevenson, the well-known Sweet Pea cultivator and exhibitor.

THE NARCISSUS FLY IN NEW ZEALAND.

LARGE quantities of bulbs, mainly Daffodils, have arrived in Auckland by every English parcel post during the last four or five weeks, and before delivery they are subjected to an examination by an inspector appointed by our Agricultural Department. While the bulk of these parcels have probably been passed as clean and free from disease, several I know have been found to contain merodon (Narcissus fly) grub and been condemned. Unfortunately, this inspection is not infallible, for to my knowledge more than one parcel containing the dreaded grub has passed the inspection and reached the addressee, both this season and last. As the regulations of the Department at present stand, any parcel found to contain even one infested bulb is condemned and destroyed *in toto*. Thus,

while in their well-meant efforts to keep out this pest a large number of perfectly sound bulbs are unnecessarily destroyed, there is no certainty that the Narcissus fly is not already established here, for though in the cases to which I refer a close examination by the importer detected grubs previously overlooked, we do not know how many similar parcels passed into the hands of inexperienced persons who probably planted them without further scrutiny. I sincerely hope that we may have escaped,



SPRING FLOWER BEDS IN FRONT OF MR. STEVENSON'S HOUSE AT BOURNEMOUTH.

but I am not at all free from doubt, and I look forward to next season with some apprehension to prove whether my doubts are groundless.

Those growers here who have considered the matter have come to the conclusion that the examination of the bulbs before leaving home, which our Government insists on, is practically useless to detect merodon grub, for the reason that the parasite has not at the time of export developed; but during the six or seven weeks in transport it grows into a fat grub, and on arrival here its presence is not difficult to detect by carefully examining and squeezing the bulb.

The local inspector was interviewed, and he discussed the subject with us very courteously, and informed us he had had experience of the fly in the Old Country. We urged the futility of the preliminary examination in England, and that while it is highly desirable that all bulbs affected, or in the slightest way doubtful or suspicious, should be destroyed, we considered it wasteful to treat the sound bulbs in the same way. He expressed himself in sympathy with our views, but stated the regulations allowed him no discretion or latitude. He promised to represent the matter to his Department, and we hope the regulation may be modified; but until it is I would suggest to all English bulb merchants exporting to New Zealand that, if they wish to minimise the risk of loss to themselves and their Colonial customers, they should not pack Daffodils with other bulbs or in large quantities, but split up orders into small parcels, expensive bulbs being packed singly. This, of course, would entail extra trouble and expense, but at present I cannot offer any other suggestion. Unless some such course is adopted, I should not be surprised if a falling off of orders from this country is experienced; and it may not be inopportune to mention that whereas formerly there were two factors affecting the volume of business between England and New Zealand in Daffodils, viz.: (1) The trouble and time (two to three years) involved in importing and acclimatising; (2) the high price of most of the newer and better sorts; there are now two more likely to bear on the matter: (3) New Zealand raised seedling varieties equal (if not superior) to many of the English varieties which have so far been imported are now coming into commerce here at reasonable prices; (4) last, but by no means least, the Narcissus fly.

Auckland, New Zealand. A. E. GRINDROD.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

INJURY TO DAFFODIL FOLIAGE (C. D.).—The foliage of the Daffodils sent is insufficient to enable us to say with certainty from what disease they are suffering. You will probably find, if you lift them, that some pest is at work either upon the bulb or upon the root.

VERBENA MAHONETTE (Mrs. L.).—We do not recall a Verbena of this name, and wonder whether the variety of *V. tenera* known as Mahonetti is intended. All Verbenas may be grown in the open from May to September. Some, indeed, as *V. venosa*, are quite hardy in the London district, while *V. chamædryfolia* is nearly so in several places. Both these hail from Brazil, as also does the variety of *V. tenera* mentioned. Complete hardiness is, however, very much a question of experiment in differing localities.

IMPROVING THE SOIL OF A GARDEN (Blenheim).—As you gave your garden a good dressing of broken-up chalk last autumn, and presumably dug it in this spring, we do not think that you are in a position in this short time to say whether the plants will be benefited by the addition of lime to the soil. From what you say, we certainly think that the chalk should be of great service in such heavily manured ground. As the season advances you will be better able to see the effects of your top-dressing, and it will then probably give satisfaction.

PRIMULAS (M. J.).—Such Primulas as *P. pulverulenta*, *P. rosea*, *P. farinosa* and *P. Poissoni* do not require to be divided each year. The first two and the last named may be quite good for three or more years if provided with plenty of rich soil and root moisture for those first named. *P. farinosa*, while strictly perennial, gives by far the best results when raised periodically from seeds; indeed, the others only attain their greatest vigour when so treated. Seeds are so abundantly produced in many of the species, and vegetate so quickly if sown almost as soon as ripe, that division of the plants, because of the frequent unsatisfactory results accruing therefrom, does not receive serious thought. Moreover, the seedling plant, for robust vigour and generous flowering, is unequalled.

PEACOCK IRIS NOT FLOWERING (T. H. C.).—The most likely cause of the non-flowering is the smallness of the bulbs, and as they have all started well and appear healthy in other respects, it leaves but little doubt in the matter. In your sun-kissed California this delightful small plant should give but slight trouble, seeing that it requires little more than a sunny position, very sandy though comparatively rich and well-drained soil, and plenty of moisture at the roots during its season of growth. After the growing season it should be given absolute rest. Like many other South African plants, the above delights in sun and warmth, and probably even with you a raised frame in a sunny position would suit it best. Strictly speaking, it is not an Iris: the correct name is *Moræa glaucopsis*.

EASILY GROWN ROCK PLANTS (E. F. H.).—You cannot do better than concentrate attention upon the Aubrietias, Mossy Saxifrages and subulata Phloxes for the most part, which will also afford you a flowering for weeks on end. Of Aubrietias, take Dr. Mules (violet), Fire King (red), Lavender (mauve), Moerheimi (pink and white) and Lloyd Edwards (rich purple). Of Saxifrages, Guildford Seedling, Clibrani, Red Admiral (all high-coloured varieties), Lady Deane, Camposii and Arkwrightii (white) and Miss Willmott (white and blush). Of the Phloxes, Nelsonii (white), Model (pink), atropurpurea (dark red) and amœna (rosy red). *Achillea rupestris* (white), *Silene alpestris* (white), *Zauschneria californica* (scarlet), *Saxifraga aizoon rosea*, *Campanula muralis*, *C. pusilla*, Miss Willmott (blue shades), and *Thymus Serpyllum coccineum* (red) are also good and easily grown.

GENTIAN NOT FLOWERING (E. J. L.).—So far as we are able to judge from the fragments before us, the plants are anxious to flower, but are debarred from so doing by conditions of semi-starvation. The leaf growth, despite the evidences of a desire to run to flower, is quite inadequate; it should be twice or thrice as large. Hence we can but conclude that the plants are too poorly grown. In soils of a hot, sandy nature like yours, a comparatively liberal fare is necessary, and plenty of summer moisture.

In providing the latter you might also give a liquid manure twice weekly to encourage and develop the growth necessary to a good flowering. The fact that the plant continues growing is an excellent sign, and if you play your part and develop that growth to the utmost, you will have flowers and plenty of them in due course. The pathway is not an ideal position, though firm planting is necessary in all light soils, and with it a fairly generous system of cultivation.

TREES AND SHRUBS.

SHRUB TO NAME (D'H. S. S.).—The specimen sent for name is the Bird Cherry (*Prunus Pados*). It grows into a moderate-sized tree and blossoms freely.

INJURY TO RHODODENDRONS (Major M.).—We regret we are unable to say from the specimens sent what is attacking the Rhododendrons, though we suspect it to be a weevil. Perhaps you would keep watch and see exactly what it is and send us specimens.

CLIPPING A HOLLY HEDGE (H. K.).—A Holly hedge may be clipped at the present time, if you so wish, but it should be clipped again in autumn. Such hedges are usually clipped on the completion of growth, so that they may be left tidy for the winter. If, however, the hedge requires a severe cutting back, April is the best time for the work. It is very difficult to rid leaf-mould of insects, and perhaps the best plan is to spread it out in the sun and turn it a few times before it is used.

IRISH YEW (A Reader).—All that you can do to your Irish Yew, which does not appear to be recovering after being transplanted, is to cut the branches back by a foot or so and keep the plant well syringed two or three times a day while the weather is dry. It is usually advisable to remove a little of the branch growth of evergreens at the time of transplanting, in order that the effect of root injury may be lessened. Should the soil about the roots appear dry, give water now and then. A mulch of decayed leaves about the surface of the soil will also be advantageous.

ABOUT HARDY FUCHSIAS (Blenheim).—The height attained by the different Fuchsias varies greatly according to the locality, for in the more favoured parts of the country they form large bushes, while in others they are usually cut to the ground during the winter, and throw up new shoots each spring after the manner of a herbaceous plant. It is therefore evident that under these last-named conditions they will not attain anything like the height that they do where they grow untouched. The most vigorous of those mentioned is *F. Riccartonii*, which in such favoured localities as the Isle of Wight and similar spots will reach a height of 10 feet or 12 feet or even more. Less in stature come *F. longipedunculata*, *F. virgata* and *F. gracilis*, while *F. exoniensis*, the shortest of all, is, unless supported, about three feet high. The other two varieties we do not know. Where the plants die down during the winter and young shoots push up in the spring, the varieties named, with the exception of *F. exoniensis*, will reach a height of 2 feet to 4 feet, according to the vigour of the plants. All these Fuchsias, and, in fact, one may say the whole of the hardy kinds, flower throughout the summer and well on into the autumn, that is, should the weather be mild. All the pruning needed is in the spring, when the new shoots make their appearance, to cut out any dead wood, or occasionally it may be necessary to shorten a shoot in order to maintain the symmetrical character of the specimen.

ROSE GARDEN.

STANDARD ROSES FOR TOWN GARDENS (Blenheim).—The note on standard Roses for town gardens that you desire appeared in THE GARDEN for April 11. Reference to standards is as follows: "The two varieties better than all others for standard Roses are Hugh Dickson and Frau Karl Druschki, and having regard to the difficulty of obtaining good heads in the average town garden, most growers would do well to rely entirely upon these two sorts. Others which may be grown with fair, if not equal, hopes of success are Mme. Abel Chatenay, Caroline Testout, Mme. Ravary, Lady Ashtown, J. B. Clark, Joseph Hill, Mme. Melanie Souper and La Tosca."

ROSE FORTUNE'S YELLOW SHEDDING ITS FOLIAGE (Spa).—This Rose does not take kindly to pot culture. It may be owing to the sudden changes of the weather, but we rather think it is over-watering and the insufficient ripening of the growths. It would be much better if you could plant out the Rose under glass; it would have its growth better ripened. One of the secrets regarding the successful culture of this Rose lies in the pruning. As soon as it has ceased blooming, prune back hard all side growths, cutting them close to the main shoots. New growths will soon appear. The weakest shoots should be thinned out during the summer, and when growth has finished cut back hard all side shoots that have sprung from the other growths during the summer, and just remove the ends of the main growths. Afford good drainage and, when watering, give water copiously; then be careful only to water when required.

THE GREENHOUSE.

SCHIZANTHUS DYING OFF (Atherstone).—The Schizanthus is apparently attacked by a fungus nearly allied to that which produces a similar disease in Tomatoes. There is no cure, and it would be well to sterilise all the soil used in seed sowing and growing of these plants in future, as in all probability the spores are carried in the soil.

THE GARDEN.

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MAY 23, 1914.

NOTES OF THE WEEK.

A Useful Wall Plant.—*Erinus alpinus*, in its varied forms, is a gem among plants that are adapted for planting on old walls, and one that is established without the least trouble if the seeds are sown in chinks or cracks, or even in moss if there is any on the wall. Such places look very bright at the present time, and will continue so for many weeks. All should grow it who have an old wall, for it will succeed there, while it often perishes on the flat ground if the soil is of a very heavy nature.

Lieutenant-Colonel Sir George Holford, K.C.V.O., C.I.E.—It affords us considerable pleasure to be able to reproduce a recent and excellent photograph of Lieutenant-Colonel Sir George Holford, Sir George is a deservedly popular member of the Council of the Royal Horticultural Society, and his valuable services are willingly and freely given on behalf of the Fellows. Visitors to the society's exhibitions will remember with very keen pleasure the magnificent groups of Orchids, Hippeastrums and other flowers that Sir George sends from his charming gardens at Westonbirt, Tetbury, Gloucestershire. At the great International Show held at Chelsea two years ago, his group of Orchids was easily the best that has ever been staged in this or any other country, not only on account of the rarity and wonderful variety of the plants, but also for the highly artistic manner in which they were arranged. It will be interesting to recall the fact that this magnificent group was awarded the cup offered by the King for the best exhibit in the show. Sir George was an Equerry to the late King Edward from 1892 to 1910, since when he has been Equerry to Queen Alexandra and an Extra Equerry to His Majesty the King.

A Beautiful Spring-flowering Tree.—In *Amelanchier canadensis*, the Snowy Mespilus, we have one of the finest of early blooming trees, and one that is not nearly so well known as it deserves to be. Its mantle of snowy white blossoms, which are disposed on short racemes and are so numerous that the tree becomes an almost complete sheet of white, produces a fine effect in spring and early summer. The usefulness of the species is enhanced by the fact that it flowers from the commencement, and plants 1 foot to 2 feet high bloom as freely as a tree 20 feet in height. It may be used in groups, or in a bed by itself, and in the autumn it is again made attractive by the richness of its deep red foliage.

Leaf-Blister on Peach Trees.—We have lately received many complaints about leaf-blister on Peach and Nectarine trees. This is caused mainly by cold wind, and especially after warm weather. The only remedy for this is to remove the leaves which are worst affected, and to encourage healthy growth as quickly as possible. The preventive is, of course, warm covering, which cannot always be applied. When warm weather sets in, the

the brilliant blue of the *Myosotis* is exceedingly fine, and Mr. Jeffrey, Captain Hope's gardener, is to be congratulated on the success of his scheme.

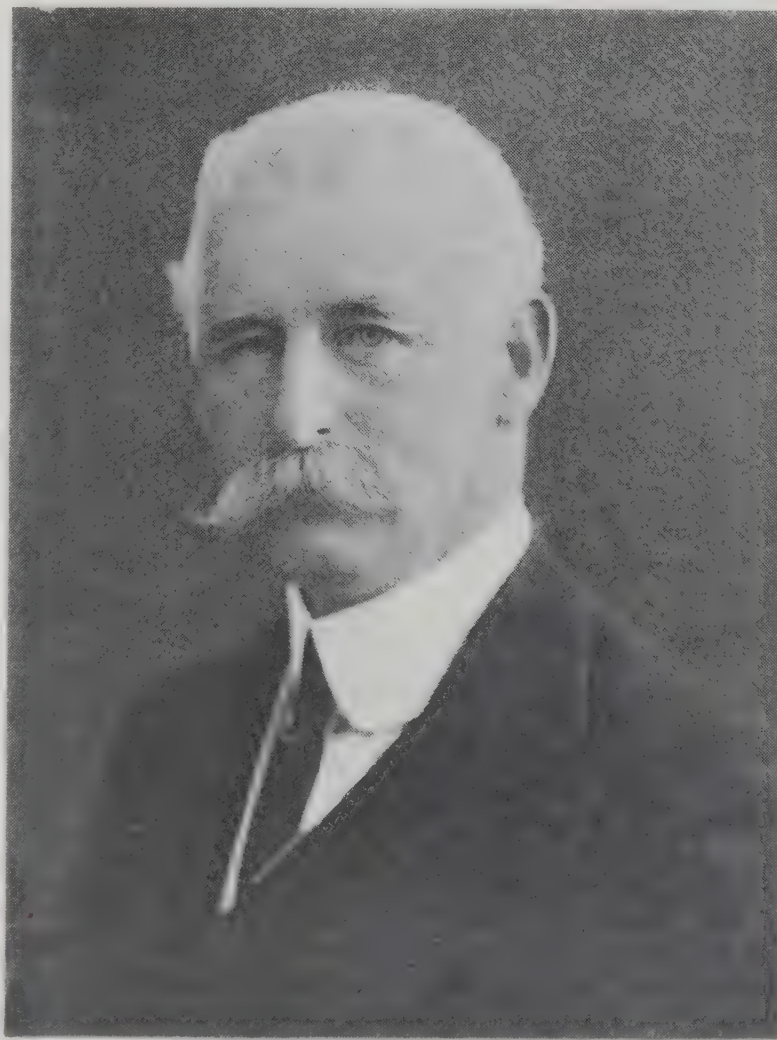
A Charming Little Rock Plant.—*Draba pyrenaica*, perhaps better known by the name of *Petrocallis pyrenaica*, should always have a place, even when the very choicest of alpine plants only are grown. Just now it is opening its delicate grey purple or heliotrope coloured flowers, which completely cover the whole plant, which is only an inch or so high. The colour may be termed a quiet one, but good patches are very effective. It requires a well-drained soil and a good open position. It is a charming little plant for the moraine, where it appears quite at home.

A New Hybrid Bomarea.—In the Botanic Garden, Cambridge, a beautiful hybrid *Bomarea* is flowering for the first time. It is the result of crossing *B. caldasiana* with *B. patocensis*, the former being the seed-bearing parent. It will undoubtedly prove to be a useful greenhouse climber, being quite intermediate between the two parents, having the free-flowering habit of *B. caldasiana* with some of the rich colour of the pollen parent, but of a much brighter red. It has been named *B. Banksii*, after the raiser, Mr. G. Banks of the Botanic Garden, Cambridge.

An Effective Combination of Wild Flowers.—While passing a wood the other day we were very much struck by the effect obtained from our common Bluebell mixed with the Greater Stitchwort or Satin Flower, *Stellaria Holostea*. The wood was a mass of blue, while on the edge of it were masses of the *Stellaria* growing among the Bluebells. The pure white of the Stitchwort formed a striking contrast to the deep blue. This is only one of the numerous instances how many of our native flowers could be used with good effect, particularly in some of the wilder parts of the garden.

Top-Dressing *Lilium speciosum*.

Plants which are growing freely and which were potted with the idea of top-dressing should now receive attention. No great quantity of soil ought to be placed round the bulbs at one time. It is better to top-dress again when the young roots are pushing through the surface. The soil may consist of turfy loam and leaf-soil, with a small quantity of decayed cow-manure and rough silver sand. As the shoots develop they should be carefully secured with neat stakes, and as aphides are sometimes troublesome, the plants may receive an occasional fumigation with nicotine compound to keep them in check.



LIEUTENANT-COLONEL SIR GEORGE LINDSAY
HOLFORD, K.C.V.O., C.I.E.

syringe, if applied twice daily, will soon restore such trees to good health.

Spring Bedding in a Scottish Garden.—A charming bit of spring bedding has been seen this year at St. Mary's Isle, Kirkcudbright, the seat of Captain Hope, R.N. This consists of a scheme of beds of the double *Arabis* dotted with plants of Sutton's Royal Blue *Myosotis*, with others of Wallflowers, both golden yellow and blood red. The effect of the snowy *Arabis* and

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Use of Grass Cuttings.—Forcing Rhubarb and Seakale out of doors with manure never seems to me a very clean way of managing. Even when the manure is only round the pots, some is apt to fall in when they are moved. It is a better plan to save grass clippings and make them into hay. Through the summer these can be mixed with the last fresh ones from the autumn cutting, and, piled round the Seakale pots, will make a splendid lining for the forcing-pit in the winter.—**ETHEL CASE, Bishops Waltham, Hants.**

Effects of the Recent Cold Weather.—Fortunately for ardent horticulturists, such a severe frost as was experienced on the evening of May 1 and in the early hours of May 2 is seldom known in May.

afforded by midday on the 2nd inst. ample food for thought.—**H. TURNER, Serlby Gardens, Bawtry, Yorks.**

Alpines on an Old Well-Head.—The photograph of the ancient well-head shows the cushion of *Saxifraga Boydii alba* to the left of the stone, as Mr. E. H. Jenkins, on page 214, issue May 2, wished to know what had become of the white sport of *S. Boydii* all this time. Our district is situated near the ancient Roman causeway Augusta-Vindobona, the Augsburg-Regensburg of the present day, and several redoubts and camps occur in this neighbourhood. There is little doubt that these well-heads, of which several were in the village, were fetched from a tufa quarry some thirty miles distant. They were each cut out of a solid block. They are about sixty inches across, and the thickness of the upper and lower rims is about nine inches, while the space between them recedes about one and a-half

The pride of the show, *Saxifraga longifolia*, which again reached 12 inches in diameter, flowered last year, and has not been replaced yet. I propose furnishing the spot with *S. longifolia* x *cochlearis*, which has similar flowers, but has the advantage of producing new rosettes after flowering.—**E. HEINRICH, Planegg, Bavaria.**

Lithospermum Gastonii.—Gaston's Gromwell is one of the most charming of all, but it possesses one great drawback in the minds of the would-be cultivator—it is remarkably troublesome in its ways. A good writer and cultivator says of it, with justice also, that it is "fairly hardy but rather difficult to cultivate. . . . One of the choicest of the whole family. They are lucky indeed with whom it will thrive." Some others have less difficulty, but the plant always remains comparatively scarce and is exceedingly troublesome to establish. It is well worth the trouble, so beautiful indeed is this 9-inch-high Gromwell, with its terminal clusters of azure blue, white-eyed flowers, borne for a while in the summer months. My object in writing this note is to point out that it may establish itself in what are unorthodox places, and that no one should despair of success without perseveringly attempting it under various conditions. Previous to an upheaval caused by removal I had established it in rockwork between stones in light sandy loam; but I was quite unprepared to see it not only growing but spreading freely in an ordinary border. This was in the garden of Mr. John Ferguson, The Hermitage, Duns—the raiser, by the way, of the delightful little *Saxifraga Fergusonii*.—**S. ARNOTT, Dumfries.**

Primulas Causing Rash.—Your correspondent "J. D.," in your issue of May 16, page 238, voices a warning concerning the rash-producing properties of *Primula obconica*, which are all too well known to many who have had it in their houses. I am sorry to see *P. malacoides* grouped with it, and, in common, no doubt, with many of those who admire that plant, would be glad to learn whether others have suffered from handling it, and whether the evidence for condemning it in "J. D.'s" case is quite clear of possible complication with *P. obconica*. It is a curious thing that many persons can handle the latter plant with impunity, while others cannot even handle its seeds without incurring the danger of rash, and momentary contact with the foliage, as in brushing past it, is, with them, sufficient to ensure irritation. In his admirable paper on Chinese Primulas read at the Primula Conference and printed in the Journal of the Royal Horticultural Society, Vol. XXXIX., Part 1, Professor Bayley Balfour says: "*Primula sinolisteri* is a plant of special horticultural interest. It was introduced in 1908 by Bees, Limited, grown from Forrest's seeds, and promises to be in our gardens what *P. obconica*, Hance, ought to have been, but is not. *P. sinolisteri*, Balf. fil., has not the irritant hairs. It is a free grower, forming compact masses of dark green, acutely lobed leaves, and the trusses of white (sometimes lilac) flowers are many. In our northern climate it is not quite hardy—like true *P. obconica*, Hance, in that respect. It was sent out as *P. Listeri*, King—a venial error of naming—and the name *sinolisteri* has been given in the hope of making the change of nomenclature less disturbing. *P. sinolisteri*, Balf. fil., is I am sure a plant of horticultural merit." It is evident that in *P. sinolisteri* your correspondent would have a plant that would exactly fit the purpose he requires it for.—**FRED J. CHITTENDEN.**



AN ANCIENT WELL-HEAD PLANTED WITH ALPINES IN A BAVARIAN GARDEN.

Here in this district (South Yorks) readings varied from 10° up to 14°, and the loss, as may easily be imagined, is most serious to fruit-growers. Notwithstanding very dry atmospheric conditions and the soil also dry, Plums and Damsons, even with the foliage well advanced, have been almost entirely ruined. Pears and Apples, too, I fear (although rather too early to say definitely) have had fully 75 per cent. of the crop killed, and this, I am sorry to add, after prospects were exceptionally bright. Currants and Strawberries, where unprotected, were likewise visited, but Gooseberries suffered little. In park and shrubbery, also, ample evidence may be found of how bitterly cold it has been. Some of the old Oaks look as though they had been badly scorched, and Sweet Chestnuts are equally sorry pictures, while even the common Laurel and Box trees had all new growth "nipped" badly. Japanese Maples and Wistarias appear to have been especially sought out, and what was on the afternoon of the 1st inst. a sight worth seeing of the latter.

inches. The place where the bucket was usually set down is noticeable in a deeply worn-out gap. When proper spring-water works were introduced, these well-heads become superfluous, and it was quite by chance that I was able to save one of them by paying 10s. for it, else it would, like its comrades, have been broken off for road-making. It had already been broken in two. I joined it together again, filled it in with a very stony compost, and planted it with alpines, which feel quite at home on it. To the left is seen the large tuft of the sport of *S. Boydii alba* of fifteen years ago; then follow *Androsace Chumbyi* (not in flower yet), *Saxifraga Elizabethæ* (the large dark plot), *S. valdensis*, *S. Aizoon rosea*, *S. cochlearis*, *S. albino Genderi*, *Dianthus microlepis*, *Leontopodium alpinum*, *Alsine Rosanii*, *Globularia nana* and *Erinacea pungens*. Down the back, not visible, is a patch of nearly a square foot of *Saxifraga apiculata* and another of *S. oppositifolia*, *S. lata* (Schott.), *Paronychia*, *Primula Auricula*, *Ramondia pyrenaica*, several *Sempervivums* and other things.



TWO BEAUTIFUL NERINES:

Pink: Dainty Maid.

Scarlet: Glory of Sarnia.

The Earliest Rose.—In reference to the question raised in May 9 issue by "C. T." as to the date of the earliest Rose bloom, I may state that I had a good flower of Bouquet d'Or open on April 20. The root of the plant is against an east-north-east wall, but the part of the plant on which the bloom made its appearance is trained against a wall with a south-south-east aspect.—E. A. C. McCURDY, *Oakdene, Ashted, Surrey.*

Primula ciliata purpurea.—Under this name I have a very fine hardy Primula, which belongs apparently to the varied and doubtfully descended class in which *P. Auricula* and *P. hirsuta* have a share. It is exceedingly handsome this year in a low, peaty bed which is moist all the winter, and which is treated to occasional soakings with pure water in the summer in dry weather. A good plant is very handsome with its large, prettily toothed leaves and its handsome trusses of purple, golden-eyed flowers. It evidently relishes the cool conditions under which it is grown, and casts in the shade a number of other plants growing in the same bed. The position is one which is largely shaded from the afternoon sun.—S. ARNOTT.

A Beautiful Tree in Scotland.—Nicholson speaks of *Dimorphanthus mandschuricus*, an interesting and ornamental plant, as a shrub, but I prefer to regard it as a tree. It is so seldom seen in Scotland that I think its hardiness must be considered doubtful, for anyone who knows it must agree that its striking inflorescence and subtropical-looking foliage entitle it to a foremost position among our ornamental trees, or shrubs if you please. Not only does it do well in the neighbourhood of Edinburgh, where I know of several good trees, but last season I came upon several healthy specimens at Dunecht, Aberdeenshire, the Scottish seat of Lord and Lady Cowdray. Dunecht is about thirteen miles from the coast, and it is no unusual experience there to have the thermometer down to zero. Of course, it is well to select a sheltered situation for this stranger from Manchuria, else its huge leaves are apt to be damaged by high winds.—CHARLES COMFORT, *Midlothian.*

Sweet Peas: The Question of Scent.—It is feared that recent improvements in regard to the size of Sweet Peas have been made, in part at least, at the expense of their perfume. Unfortunately, the trend of the modern grower is to endeavour to produce what can only rightly be described as abnormal blooms on ultra-long stems, regardless of one of the flower's undoubted fascinations, for the table—that of fragrance, with the result of the above-mentioned deterioration. The advent of the waved type brought about the first sign of this decadence, and now the delicious scent of a freshly cut bunch of the old (out of date) grandiflora sorts is to be cherished only as a sweet memory, unless, of course, one still grows for this original quality. The old cream variety, Hon. Mrs. Kenyon, was possessed of a delightful scent, which, in a somewhat lesser degree, is to be found in Clara Curtis and Queen Victoria Spencer. From that finest of all whites, Dorothy Eckford, very sweetly scented, we get a weaker quality fragrance in Moneymaker and Etta Dyke; while the old lavender favourite, Lady Grisel Hamilton, hands down some of its perfume through Frank Dolby, but less in that mammoth variety R. F. Felton, so dear to every exhibitor's heart. The lavenders or mauves are, however, all more or less still nicely scented. Speaking generally, my experience teaches me that the less the "wave" of a variety the more

fragrant will it be found. I will conclude these brief remarks with the mention of what, out of varieties which I have grown on my light soil (leaving out of consideration grandifloras, except Dorothy Eckford, which still remains the best white in colour, substance and scent) I consider to be the six most fragrant, in order of degree: Paradise Ivory, Dorothy Eckford, Clara Curtis, Queen Victoria Spencer, Frank Dolby and Moneymaker.—B. W. LEWIS.

Slug-Harboursing Alpines.—In my recently published book, "The Small Rock Garden," there is to be found a chapter—very brief, it is true—on the "Animal Pests of the Rock Garden," and, seeing that the ubiquitous slug is therein characterised as the "worst" of such pests, the subject of the present note may be considered as nearly related thereto. The first thing the rock gardener or lover of alpines must realise is that the slug is always present, and though he may appear to be taking his "days off" in a more or less erratic way, he may still be found asleep under cover of a neighbouring plant. Hence the title of this note. In other words, certain plants, such as Aubrietias, Veronicas, Phlox subulata varieties, *Acæna* and the like, all of which have prostrate, spreading tufts of leaves, may justly be regarded as of a slug-harboursing nature; and, of course, they are not alone. For the moment, however, it is the principle to which I would direct attention, the knowledge of where to look for this much-to-be-dreaded pest, which, while making nightly raids upon the choicest things a rock garden contains, does not remain in the immediate vicinity of such plants, but betakes himself to the friendly shelter of the slug-harboursing alpine, where he is content in the seclusion, shelter and uniform moisture such plants afford. To be quite sure of the reason for the slug betaking himself to such quarters, one has only to examine a slate, piece of board, or sack that has lain upon the ground for a few days, there to find one or more slugs invariably present. Hence, realising that the reason for his retreat is seclusion and cover, the gardener has only to imitate such conditions to get the slug into the trap. A portion of a rather thick Deal plank is excellent, better perhaps, for some reason unknown to me, than either the slate or sack; and though such things may appear a little unsightly in the rock garden, unsightliness is more easily endured than the ravages a few slugs may create. A surprising thing about the slug is the distance it will travel to get a bite from some choice morsel of alpine vegetation; hence one can only imagine that its sense of smell or appreciation following an earlier meal must be very keen. In the past we have been content to try a Cabbage leaf or two, but these are not of great service unless the whole of the under surface of the leaf is practically in touch with the soil. In the case of the wood trap, rough, partly worn planks have been found better than new, the slugs invariably clinging to the wood and not congregating on the soil. Damp wood, too, is better than dry; moisture, indeed, would appear an essential condition.—E. H. JENKINS.

FORTHCOMING EVENTS.

May 25.—Linnean Society's Anniversary Meeting at 3 p.m. Rhododendron Show at the Royal Horticultural Society's Hall, Westminster (five days).

May 28.—Bath and West and Southern Counties Society's Show at Swansea (five days). Royal Botanic Society's Meeting.

OUR COMPETITION FOR PLANNING & PLANTING THE LITTLE GARDEN.

As fully announced in our last issue, we are offering cash prizes of the total value of £33 12s., as well as a number of book prizes, for the best designs for planning and planting the little garden. Four typical sites, such as are usually met with for small gardens, have been chosen, and competitors may send in designs for one or all of the sites. The rules and conditions governing this competition are to be found in last week's issue, together with the "application form" which is to be used by the competitors. In case some readers did not secure that issue, they can enter the competition by filling in and posting to the Editor the form printed on page IV. This form must be accompanied by four penny stamps to cover the cost of the sheets on which outline plans of the sites are given and on which the designs for planning and planting are to be drawn. One of the objects of this competition is to emphasise the fact that the little garden can, and should, be planned and planted with as much care and taste as gardens of more pretentious dimensions. For this reason we hope that as many of our readers as possible will compete for at least one of the sites. The competition has already attracted considerable attention, and general satisfaction has been expressed that judges of architectural features as well as of actual planting have been chosen. So great has been the demand for last week's issue that it is practically out of print, but copies of the rules and the conditions of entry can be obtained on application, and will be sent post free on receipt of three halfpenny stamps. Ample time has been allowed for sending in the plans, in order that busy gardeners may have full opportunities of competing, and that our numerous foreign and Colonial readers may join in the competition.

THE CAPE BLADDER SENNA.

This beautiful flowering greenhouse shrub (*Sutherlandia frutescens*), is at its best as a rule in July and August. It forms an upright-growing plant, clothed with pretty pinnate foliage of a greyish hue. The drooping scarlet flowers, which are about one and a-half inches in length, are very suggestive of those of *Clanthus puniceus*. These are in their turn succeeded by inflated seed-pods, whence the popular name is derived. It was introduced from South Africa in 1683, and has long been grown as a greenhouse plant. Within the last few years it has, however, become very popular as dot plants for summer bedding, for specimens about three feet high will flower profusely. Last year it was very effective at Battersea Park, a large bed being planted with the variegated *Holcus mollis* and the crimson *Begonia semperflorens* Ruby, edged with a broad band of *Koniga maritima*. As dot plants over the bed were good examples of *Sutherlandia frutescens* in full flower, the general effect being a very pleasing one. It can be struck from cuttings of the young shoots, taken in spring, inserted into pots of sandy soil, and placed in a close propagating-case till rooted. Plants so propagated will flower in a smaller state than seedlings.

WATER-SIDE GARDENING.

COMPARED with former times, when the chief inhabitants of lake, stream-let or pond were little more than an unkempt mass of coarse grass or other herbage, the beautifying of the water-side to-day is almost reduced to fine art. In proof of this the reader has only to turn to the front page cover of the present issue. There will be seen at a glance all that is best in foliage and flower beauty—a superb fore-

we garden on a large or small scale, there will not be found wanting material of a suitable kind. Hence the larger areas may indulge the stately Reeds, as *Arundo Donax* in variety (where these are sufficiently hardy), the bolder Bamboos, giant Groundsels, *Polygonum* or Pampas Grass, while not forgetting the handsome *Gunnera*, which appears in splendid isolation above the Irises in the picture. Among hardy herbaceous perennials the *Gunnera* knows no peer, whether viewed from the standpoint of noble aspect or picturesque beauty. The plant, too, is at home by

room for full development as opposed to that species of massing which robs a plant of its right of action, it will not be lacking admirers. There are also *Primulas* of high merit for the cool, moist or sequestered spots of the garden, with *Rodger-sias*, *Saxifraga peltata* and *Trilliums*. Of the *Primulas*, such as *rosea*, *japonica*, *pulverulenta* and *Sieboldii* in variety all delight in moisture, whether at or near the water's edge or in woodland shade. Last, though by no means least, there is the great array of Japanese Irises (*I. laevigata*), of which a splendid grouping is portrayed on the front page. Rich in variety, producing shades of blue, white, red, crimson, and violet in single or semi-double flowers that may be anything from 6 inches to 10 inches across, they are gorgeous in the extreme, occupying a pedestal of their own for high ornament and flower beauty. No pen-picture could adequately portray the merits of this great and fitting final to a genus itself unique. They are usually in flower in July and August.

If in conclusion one might add a cultural note, it would be to say that soil and soil richness to these water-side plants cannot with impunity be ignored. By some the water—the moisture—has been regarded all in all, but it is only true in part. In conjunction there should be sweetness and the soil richness above referred to. Then, the "moisture-loving" subject should not be transformed into an aquatic. These Irises are a case in point. Revelling in rich food supplies, and coolness or moisture within reach of their root-fibres, they resent the permanently submerged condition, and unmistakably when planted in brick earth. In lighter loams or those rich in vegetable matter in which

the roots can ramify freely, they give of their best, and in their season are a source of pleasure and delight.

E. H. JENKINS.



BERBERIS STENOPHYLLA EFFECTIVELY PLANTED BY THE WATER-SIDE. IT HAS GOLDEN YELLOW FLOWERS AND IS QUITE HARDY.

ground mirrored into fullest life by a foil savouring of the ideal. Within the limits of such a setting as the picture portrays it would be possible to accomplish much—possible, indeed, by inserting some of the best of Nature's jewels to display both the gems and the setting at their fullest worth. Herein lies the "art which doth mend Nature," and the gardener who accomplishes so much has already elevated the gardening art to the highest rank. It may be said that a scene like that depicted would only be possible in like circumstances; that the picture minus the framework would lose half its charm. Exactly. At the same time I would point out that it is the wedding of the two which constitutes so beautiful a whole. One may look in vain for incongruities, only to find a picture of high ornament and realistic effect. As a whole it is ideal; invaluable as an object-lesson, even if not possible in all circumstances of reproduction in detail. To have such a picture in the mind's eye when engaging in water-side gardening would be worth much. To mould, modify or adapt to special requirements is the work of the moment, and with the ideal in view the gardener need not err. It is all a question of making the most of opportunities; and whether

the water-side, and though not requiring its roots submerged, revels in cool places and rich and deep soils. There are boldness and distinction, too, in the towering creamy plumes of giant *Astilbe* and Goat's-beard *Spiraea*, the last-named genus also affording colour shades of pink and carmine not found elsewhere. Then for flower beauty and grace combined none can compare with the tall-growing North American Panther Lily, whose crimson flower-shafts, 8 feet or more in height, show well amid willowy Bamboos and delight in their shelter-affording sheaves. These Lilies are most happy in peaty earth, though soil richness is much to their liking.

For smaller areas the gardener may indulge in the newer *Astilbes*, hybrid descendants of *A. sinensis*, *A. s. Davidii* and others, which are peculiarly adapted for the water-side. There is also the unique *Spiraea palmata* from Japan, than which no herbaceous kind is so endowed with flower wealth. Given deep, rich, cool soils or root moisture, the spreading rosy carmine cymes of blossoms appeal to all, the well-marked leafage being appropriate for so meritorious a plant. Two and a-half feet or 3 feet high, amply habited and self-supporting, it is a plant for all, and, given

BERBERIS STENOPHYLLA.

This beautiful Barberry is said to be a hybrid between *Berberis empetrifolia* and *B. Darwinii*. Its successful cultivation presents no difficulty, as it seems to grow well on most soils and situations, and it can be used successfully for almost any position in the pleasure ground. As an isolated lawn specimen it is particularly graceful, its long, slender shoots spraying over with a fountain-like effect, which is beautiful at all seasons, but especially so when the plant is covered with a profusion of bright golden yellow flowers, almost hiding the foliage from view. It is also eminently suited for planting rough and steeply sloping banks, where it gives a beautiful cascade-like effect. It is equally at home on the margins of woods and shrubberies, and also planted in good bold masses in thin woods. In common with many members of this family, it does not transplant well when it is large; but young plants present no difficulty in this respect.

It is surprising that it is not largely used as a hedge or screen, for which purpose it is very beautiful; but it should not be clipped with the shears, as this destroys the character of the plant. The trimming or pruning should be done with the knife, simply picking out and shortening back the too strong and rampant shoots. This operation is best done after it has finished flowering. Trimmed in this way, the hedge is kept sufficiently dense and the graceful habit of the plant preserved. In the Southern Counties its flowering season is usually from the end of April to the middle of May. The plant is easily propagated by means of layers laid down during the autumn, or by cuttings of the ripened wood put in sandy soil in a cold frame.

BORDER CARNATIONS FROM SEED.

THAT the border Carnation is an easy plant to grow to perfection few would maintain, but in spite of recent opinion to the contrary, I firmly believe that in most parts of these islands this plant can be very successfully grown

without the aid of glass. In the moister parts of Britain I believe it would be difficult, for though layers which are well established in autumn will withstand severe frost with impunity, they will quickly succumb if their roots come in contact with stagnant moisture, and damp atmospheric conditions are most favourable to the fungoid diseases, which are, perhaps, the worst foes with which the Carnation grower has to contend. These difficulties are greatly reduced in well-drained districts; but from planting in September to flowering in August is a long way, and when wireworm and eelworm, slug and sparrow, aphid, rust and spot have their toll, there is small wonder that the outdoor culture of Carnations is a difficult, though possible, task.

To be successful, a great deal of time, ingenuity and patience are desirable, even to make the best of a few hundred plants, and many have not the requisite time, without which skill and enthusiasm are of little avail. There are doubtless many who have tried Carnation-growing under these conditions, and their efforts have ended in disaster, and these are they who are easily led to believe that the border Carnation is a difficult plant, a specialist's fancy, and as such best left to him with as little envy as possible.

To these—who would grow Carnations, but have had trouble with named varieties—I should like to recommend the trial of seedlings. To those who have not done so, a new delight is in store. But here a word of warning: there are seedlings and seedlings. If ever there were a time when something could readily be obtained for nothing, such time has gone, and if Carnation seed is to be grown, it is waste of time to use anything but the best. Several specialists in Britain, whose reputa-

tion is world-wide, retail hand-fertilised Carnation seeds at half-a-crown for the hundred, and a better investment a gardener cannot make. There will be more genuine pleasure from such a packet than from a pound of the inferior stuff often sold as Carnation seed. This is the first point; the second is, sow early.

May is a good month to sow, and seedlings which are above ground by the end of the month will prove very satisfactory. The seed germinates quickly, and the seedlings are very liable to damp off unless care is exercised in watering. As soon as they can be handled, prick off into boxes or sheltered beds, and by the third week in July they will probably be about the size of small layers, and should then be planted in their permanent quarters. A plot well manured for the previous crop should be made very firm, and the plants put in 16 inches apart each way, a wider alley between every series of five rows proving very useful at a later stage. Planted very firmly in this manner, they will be well established before winter, and will make a useful root system, though top growth will not be great until spring, when the beautiful green-grey shoots

quite possibly no two plants in the batch being alike; but though each may not be a Daffodil Elizabeth Schiffner, there is sure to be something, at any rate, worth preserving, if only for one's own use, and there are always with these plants the pride of the raiser and the sense of something accomplished which more than recompenses for some slight fault of form or colour to which a mere florist or envious neighbour might point. If this be not too long already, I should like to add a census I took of the results of one packet of seeds bought from a leading grower in the South: Sowed, April 27, 1911; 100 seeds; plants, 93; singles, 3; selfs, 23; fancies, 23; white-ground Picotees, 3; yellow-ground Picotees, 11; flakes, 14; bizarres, 5; did not bloom, 7; died through various causes, 4. The number of singles alone speaks for the quality of the seeds.

East Yorks.

F. M. S.

WISLEY GARDENS IN MAY.

WHILE visitors are attending the Royal Horticultural Society's Show at Chelsea in almost alarming numbers, only comparatively few find



CYTISUS PURGANS GROWING AMONG HARDY FERNS AT WISLEY.

must be protected, where sparrows are abundant, by black thread tightly stretched across the beds. To the writer's eye, there is no more pleasing sight in a garden than a bed of healthy Carnations at this season. Timely and careful staking, and an assisting sprinkling of manure, will bring the time of blooming along, generally a month earlier than that of layered plants; and to examine the shapely calyces morning after morning is a mingled pleasure and exasperation—they are often so slow in opening that it is almost impossible to keep itching fingers from assisting in the revelation of self or flake, quaint bizarre or dainty Picotee

their way to the society's beautiful Surrey gardens at Wisley.

The Rock Garden.—This is one of the more recent additions at Wisley, and it is destined to be one of the great features of these beautiful gardens. Bright patches of colour crop up here and there among huge boulders of rock, and the whole scene appears like a mountain slope clothed with richly coloured alpine flowers. There are Saxifragas in endless variety. *S. decipiens* and *S. Wallacei* make bright patches of white, while *S. Red Admiral* and *S. bathoniensis* vie with one another in brilliant red hues. The alpine

Wallflowers in orange yellow tones make a pleasing contrast to the Iberis and Arabis, which look like drifts of snow in the distance. Aubrietias in varying shades of purple, Arenarias and Violas in variety also lend pleasing shades of colour in the rock garden. Primula involucrata, too, is looking very dainty under the shelter of a rocky ledge, while in bright sunshine Gentians are induced to open their flowers of steely blue far more freely than they usually do in an English garden. In damp and shady places the American Wood Lily is flowering freely, while the moraine is full of interesting gems, some of which promise to flower well a little later on.

Flowering Shrubs.—Now that the Prunuses are passing over, the Hawthorns, Lilacs and Laburnums keep up a succession of blossom among the trees and shrubs. Viburnums, too, are very fine, and the same may be said of the

COLOURED PLATE.

PLATE 1494.

TWO NEW NERINES.

WHEN in flower, Nerines are among the most beautiful of all greenhouse bulbous plants. Some of the flowers are of beautiful art shades in colour, and many of them when seen in sunlight show a diamond-dust effect on the petals which is truly exquisite. The varieties Dainty Maid and Glory of Sarnia were shown before the Royal Horticultural Society in October last by Messrs. Barr and Sons, Covent Garden, to whom we are indebted for the following particulars and for the flowers from which our coloured plate has been prepared. Both varieties were raised by Messrs. Charles Smith and Sons of Guernsey.

temperature of 45° to 50°. The mistake which is often made in growing them is that they are given too much warmth. It is very important that they should have an abundance of air and light. The bulbs ought to be potted up in the summer in a compost of rich sandy loam with a little charcoal, and when in growth should be watered freely, a little liquid manure being occasionally given them. During the winter a free foliage growth must be encouraged, and when this begins to turn yellow in the spring the watering should be suspended and the pots placed on a warm, sunny shelf."

RAISING NEW ROSES.

[In Answer to a Correspondent.]

We are glad you find *THE GARDEN* so interesting. It must be a great joy to yourself to read of what others are doing, even though deprived by sickness from entering into the work more fully yourself. If you have a small greenhouse, you could produce some seedling Roses, for it is very simple, and although you could not carry out the work upon scientific lines as do the great raisers, yet there would be a rich fund of pleasure accruing even from a small effort. The novelties are raised from seeds produced under glass. Established plants are made to bloom about March and April, and their flowers cross-fertilised. Suppose you desired to obtain a cross between, say, Willowmere—which we may illustrate during the summer—and Rayon d'Or, you would contrive to have these two Roses in bloom at the same time. Before the flower of Willowmere had developed, you would remove all the petals, then cut away the stamens before the pollen grains burst. These pollen grains are contained in the stamens, as you doubtless know. The flower would then have its pistils remaining. Upon these pistils the pollen would be transferred by a camel-hair brush from the developed flower of Rayon d'Or, and in course of time the fruit, seed-pod or hep would appear. This is allowed to hang upon the plant until ripe, that is, until it turns yellow or red, whichever the case may be, for these fruits of the Rose assume remarkable colours and shapes,



A BEAUTIFUL COLONY OF PRIMULA JAPONICA IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY.

Brooms, of which Cytisus purgans is unquestionably one of the very best. This species has bright golden yellow flowers, and it is said to be one of the parents of C. præcox, the other supposed parent being C. albus. The Azalea garden is now a perfect mass of colour in warm tones of orange, yellows and fiery reds. There are no other flowers that can vie with Azaleas for colour effect.

In the Wild Garden.—The greatest charm of these gardens we leave until the last. It is the wild garden, preserved in much the same form as it was in the days of Mr. G. F. Wilson, the late owner. Here may be seen Primula japonica in tens of thousands under the shade of trees and clothing the banks of a small stream. Our illustration shows a winding pathway through the woodland with a wealth of flower on either side.

On another page will be found a reference to the Tulip trials at Wisley.

"The parentage of Dainty Maid is Nerine crispa (seed parent) × N. Fothergillii (pollen parent). It is a very elegant and delicately coloured variety, growing 16 inches high and having an umbel of flowers measuring 5 inches across. The floral segments are narrow and prettily undulated, and of a delicate flesh colour. The parentage of Glory of Sarnia is N. coruscans major (seed-bearing parent) × N. Fothergillii major (pollen parent). This is a most brilliantly coloured variety, producing umbels of medium-sized flowers, and with prettily recurved and undulating floral segments; colour, lustrous fiery orange scarlet, having the appearance of being bespangled with gold; height, 16½ inches. This plant received an award of merit from the Royal Horticultural Society.

"With regard to culture, these Nerines are easily grown in a cool greenhouse having a winter

some appearing like miniature ripe Jargonelle Pears, others round like miniature Tomatoes. When the fruits or heps are ripe, they are placed in damp sand, and at Christmas the seeds are taken out and sown in pots or boxes. Sometimes one pod or hep contains as many as thirty seeds, and if all of these germinated they would most probably all be different, some worthless, others perhaps superior to either parent, for, you see, there is always an element of chance. One may produce a really startling novelty from just a pod or two, or one may sow thousands of seeds and not obtain a novelty of merit. But we view the matter from the same point as the late Lord Penzance, who raised the Penzance Briars. He said that if the novelties were not of very great merit, they at least gave their raisers varieties no one else possessed, and to have such growing in one's garden must add greatly to its charm.

REVIEW OF THE SPRING SHOW AT CHELSEA.

EQUALLY as good in quality and far better arranged than the International Show of 1912 aptly describes the great spring exhibition of the Royal Horticultural Society which opened at the Chelsea Hospital Grounds on Tuesday last. This year the Large Tent, covering an area of over two acres, is devoted to groups arranged on the floor, so that visitors have ample room to walk between them and admire the flowers. This is an improvement on the last show, when the tables in this tent were too close together and the gangways too narrow, with the result that visitors had considerable difficulty in moving about. The ventilation of all the tents, too, has been considerably improved, and it is evident that the Council are making efforts to study the convenience of visitors.

Outdoors, rock and formal gardens abound. In many instances these leave little to be desired, good taste, both in planning and planting, being evident. In a few instances, however, there seems to have been a peculiar lack of restraint in the use of stone. One would have thought that the enormous expense of conveying many tons of stone to an exhibition would have had the effect of keeping this in its proper proportions. We hope the day will never arrive when this great show will more closely resemble a stone-mason's yard than a series of natural gardens. In surveying these rock and formal gardens we were rather at a loss to understand the curious mixtures of natural gardens and artificial displays that the Council have tolerated. We cannot conceive anything less gratifying to the mind or eye than well-designed rock gardens cheek by jowl with glaring white and gold pillars and teak-wood seats. This indiscriminate letting of sites for sundries is not to the ultimate advantage of the society, though the pecuniary reward at the moment may be a consideration. The tea tent, also, necessary as it was, could surely have been more appro-

priately situated than between two sets of rock gardens. Red and white striped canvas does not harmonise with grey lime-stone. Queen Alexandra graciously visited the show on Tuesday morning, and spent a considerable time in admiring the flowers. So far as we could gather, on the opening day visitors were more numerous than ever, and it is evident that interest in horticulture is still on the upward

FORMAL GARDENS.

The formal gardens are not numerous, but by introducing a phase constitutes a most interesting feature.

In this department Messrs. Thomas Crowther and Sons, 282, North End Road, Fulham, S.W., have a display of old garden furniture, hammered iron gates, lead vases, temples and the like, some of which are highly ornamental and beautiful.

Messrs. Joseph Cheal and Sons, Crawley, have a formal garden in which a general garden scheme is adopted, shrub borders, rock-work and alpinas, Rhododendron banks and Azalea borders, Rose temple, arches, pergolas, paved ways, stone walls, Yew and other hedges being among the features introduced.

Messrs. Carter and Co., Raynes Park, S.W., have a particularly attractive garden, with Tudor summer-house in Horsecombe stone facing, stone dovecote, paved ways, dolphin fountain and basin, with Water Lilies, octagonal summer-house and other distinct features. The Rhododendron borders are a blaze of colour, the variety Pink Pearl making a fine show. The paved pathways, stone walls and roofs of the summer-houses are all suitably planted with Stonecrop, Houseleek and other plants. The Wistarias are very beautiful.

The formal garden arranged by Messrs. Wallace and Co., Colchester, is well conceived and admirably executed. The beautiful garden-house in Horsecombe stone, roofed with similar material, is delightful in its naturalness, the Norman style leaving nothing to be desired. In its way it is unique. The whole arrangement is encompassed by low stone walls, Box and other hedges, while stone steps and paved ways are as natural as could be. Within the walls are borderings of Flag Irises, which in their quiet tones beneath the shade of

trees are delightful in the extreme. Tulip borders are also a strong feature, while a well kept lawn adds to the quiet and beauty of the whole.

That arranged by Messrs. Pulham and Son, 71, Newman Street, W., comprises a sunk garden, with imposing fountain basin, seats, sandalwood pergola, balustrades, seats and the like. The "bird bath" is a feature here, and attracts much attention. In addition, there are grey borders



QUEEN ALEXANDRA AT THE OPENING OF THE SPRING SHOW
AT CHELSEA.

grade. In the pages that follow will be found a review of all that is best in this really wonderful exhibition. In the preparation of this Special Number we have been greatly assisted by the officials of the society, especially the Rev. W. Wilks, Mr. S. T. Wright and Mr. Frank Reader. Without their assistance it would have been impossible to have published an illustrated report of the show in so short a time.



SKETCH PLAN OF MESSRS. R. WALLACE AND CO.'S GARDEN HOUSE.

with others of scented shrubs, Lavender, Rosemary and the like. This exhibit is worthy of study.

Messrs. Piper, Bayswater and Barnes, have what they call a Wistaria garden, a circular arrangement, in which several flights of stone steps with their accompanying balustrades appear. The paved ways are lightly planted with vegetable life; the coping of the balustrades bedecked with an ample display of old, well-flowered examples of Wistaria, which are charmingly flowered. The whole idea is original and good, only requiring time to give it the requisite tone.

The Yokohama Nursery Company, Limited (Yokohama, London and New York), Craven House, Kingsway, have near the Lime Avenue a very pretty arrangement, into which all things Japanese enter—Japanese tea house, temple garden and temple lanterns, dwarfed trees, Wistarias and the like. The latter are very beautiful, well flowered and highly decorative.

ROCK GARDENS.

With the great International Show of a couple of years ago still fresh in the mind, it might savour of the absurd to say that rock gardening has never been seen in such excellence as that now on view at the Chelsea Hospital Grounds. At the same time it may be said with truth that on no former occasion has greater general excellence prevailed, or that better taste or skill has been displayed in its execution. In a word,

while the rock gardening star is obviously in the ascendant, there are also signs—the outcome of knowledge born of experience—of more studious and thoughtful work, and that phase of it in particular which, rendering such exhibits suggestive as a whole, also make repetitions of them possible in many gardens to-day. To have achieved so much is the highest aim of any exhibition; to bring to a high state of perfection is to excel. That, indeed, is the position of rock gardening to-day, and the two or three dozen exhibitors who have ranged their skill and displayed their taste side by side near the Embankment merit all praise.

Taking them in order of position, we first come upon a well-executed piece of work of 1,000 square feet or so arranged by Messrs. Waterer, Sons and Crisp, Bagshot and Twyford. Here prettily colonised and grouped we find many good things, more particularly the rare Phlox Douglasii, Arenaria juniperina, white Thymus subcitratus parviflora, Campanula Allionii with rich purple bells, Pentstemon Bridgesii, Lewisia oppositifolia, Mazus reptans (a true carpet covered with flowers not more than an inch high), many choice Primulas, alpine Phloxes and the like. The whole is executed in the Derbyshire limestone, and rendered pleasing and effective.

In the adjoining group from Messrs. Garnet and Co., Farley, near Leeds, the showier kinds prevail, masses of Phloxes, Aubrietias and the like, with Ourisia coccinea, Oxalis enneaphylla, Primula frondosa and others.

Bakers, Wolverhampton, are responsible for a well-conceived arrangement in which the larger rock groups are finely displayed. Some excellent crevice planting is also noted in this exhibit, with the dainty-leaved Japanese Maples playing a good part. The finer groups of things, and these rich in effect, are composed of Incarvillea brevipes, Tiarella unifoliata, Achillea rupestris, Saxifrages Codsall Cream and Miss Willmott, Cheiranthus Allionii, C. Warley Bronze (quite a distinct plant), Lithospermum intermedium and Daphne Cneorum.

That arranged by Messrs. Whitelegg and Page, Chislehurst, is particularly good and effective as well as spacious, a charmingly arranged miniature ravine constituting a great attraction. The sides of this will be found teeming with Ramondias, and higher up on rocky ledges the Edelweiss with Oxalis enneaphylla. In freer masses elsewhere will be found Phloxes, Saxifraga longifolia latifolia, Primula Unique Yarm variety, P. cockburniana, P. Unique Improved and P. cortusa villosa. Viola J. S. Martin (V. gracilis x V. bosniaca) is presenting a rich array of purple colour; while above all and in the wood beyond Irises and other plants are to be seen naturalised.

Messrs. T. S. Ware, Limited, Feltham, have done much excellent work with their allotted 600 square feet, and employ the Surrey sandstone to good effect. Their finer colour masses are made up of Aquilegia glandulosa (blue), Potentilla pyrenaica (rich golden), Tiarella cordifolia (cream), Viola pedata bicolor, Ramondias and Lithospermum Heavenly Blue. Among choice things will be noted Astilbe simplicifolia, Androsace primuloides, Haberleas and Lewisia Cotyledon, which is very charming. There will also be noticed a capital lot of hardy Cypripediums associated with Ferns in a cool and sheltered place. Altogether a highly attractive exhibit.

Mr. Maurice Prichard, Christchurch, has a well arranged rock, using Cheddar stone, of which there are many excellent specimens. Associated with this, the choice plants employed appear delightful in the extreme. Some of those to be sought out include Heeria elegans (of which there is a fine rosy mass), Silene pusilla (white, very dwarf), Arenaria verna plena, Oxalis enneaphylla rosea, Scutellaria indica japonica (blue), Gentiana verna, a fine lot of Primula Lissadell Hybrid, the rare fringed flowers of Schizocodon soldanelloides, Saxifraga cæsia præcox (a large-flowered early form), with choice masses of Mimulus radicans, Asperula athoea and the like. Cypripediums and dwarf Ferns are charmingly associated.

Adjoining this, Messrs. Barr and Sons, Covent Garden, W.C., have a capital piece of work, using the Cheddar limestone with good effect. At the moment of our inspection the brightest-coloured mass was seen in a grouping of Oxalis brasiliensis, while among other notable things the Peacock Iris (so-called), I. cristata, I. gracillipes, the rare Calochortus on sunny slopes, Viola pedata, Cheiranthus Allionii, C. mutabilis and Helichrysum bellidioides are all worth seeking. Dodecatheons, Sarracenias, Cypripediums, Primulas, Orchises and other suitable subjects associated with water are also pleasingly grouped.

On a bolder scale, by reason of employing larger rock masses and ascending to greater heights, Messrs. Pulham and Son, Broxbourne and Elsenham, have a picturesque piece of work in Derbyshire limestone, the interspersing paths paved with York stone slabs in irregular rectangular and crazy mosaic form. A bold waterfall

and streamlet are also effectively executed with suitable groupings of Ferns, Ceanothus, Epimediums, Gunnera, *Leiophyllum buxifolium*, *Meconopsis* and flowery masses of *Daphne Cneorum*.

Messrs. Wallace and Co., Colchester, have one of the largest stations and have arranged a highly meritorious exhibit, the design, as also the fine selected stone, attracting immediate attention. The plants here are almost bewildering in their variety by reason of the way that every crack, cranny or crevice is charged with its quota of alpine vegetation. Perched high will be found the Edelweiss, or jutting out from some rocky crevice such things as *Saxifraga cochlearis*, *S. Aizoon* or *S. cochlearis minor*. In freer groupings will be found *Onosmas*, *Viola pedata*, *Campanula Stevenii nana*, *Saxifraga Dr. Ramsay*, *S. Cotyledon* and the like. Then the spreading tufts of *Helichrysum bellidioides*, *Lithospermum*, and *Saxifraga Aizoon lutea* are worth seeking, while, anon, trails of the royal purple bells of *Edraianthus serpyllifolium major* will be found or tufts of *Iris gracillipes*. To make the exhibit comprehensive and complete, a pretty water-course has been formed with Primulas and Ferns in cool and shade. The association of shrub and rock is very good and quite worth noting.

On the opposite side of the Drive the Misses Hopkins, Shepperton-on-Thames, have a compact, prettily arranged exhibit of rock and alpine plants. Here will be found the alpine Phloxes, *Houstonias*, *Primula sikkimensis*, *Lithospermum Heavenly Blue*, many choice Saxifrages, the rich blue of the alpine Columbine, *Veronicas* and other good things.

The Guildford Hardy Plant Nursery has an excellent exhibit of rockwork, employing the Godalming sandstone with good effect. The stone is well fashioned and suited for the purpose, and, moreover, like all other sandstones, is sympathetic to plant-life. The firm is using many choice plants, some of the more conspicuous being *Sempervivum rubricundum*, *Cheiranthus mutabilis purpureus*, *Erpetion reniforme*, *Viola cucullata* (very fine), *Linum capitatum* (yellow), *Dianthus arvernensis* (a very choice alpine Pink), and the like. Showier things, as *Geum rivale* Leonard's variety, *Phlox Laphami* and *Heucheras*, are good, though the visitor must not omit *Onosmas*, *Oxalis enneaphylla*, *Parochetus communis*, and the charming effect which *Sempervivum Laggeri rubrum* is producing.

Mr. Clarence Elliott, Stevenage, has a nicely executed piece of work near the entrance, using in plenty the freer-flowering masses of things, while garnishing crack and cranny in all directions with the choicer morsels. Of those which cannot fail to appeal are *Helianthus rosmarinifolius* (white), *Oxalis enneaphylla rosea*, a fine mass of *Iris cristata*, *Pentstemon Davisonii*, *P. Riezli*, the pretty red-flowered *Dianthus squarrosa* and *Daphne Cneorum*. Shrubs and dwarf conifers are well placed amid finely selected Cheddar limestone.

Messrs. Kent and Brydon, Darlington, are employing Westmorland limestone with good effect, and associating with it *Primula bulleyana*, *Wahlenbergia serpyllifolia*, *Campanula Allionii*, *Ledum palustre*, *Trilliums* in splendid form, *Anemone sylvestris*, *Lithospermum graminifolium* and others. A miniature alpine meadow and bog garden are also features to be noted.

Mr. G. Reuthe, Keston, Kent, has also arranged a very delightful exhibit, delightful in the sense

of choice and rare, that ever appeals to the specialist. *Haberlea Ferdinandii-Coburgii* is here. It is finer and better than the old form. *Diplopappus pedunculatus* with violet flowers is rare and good; *Leontopodium lindarvianum* is a new species of Edelweiss, *Æthiopappus pulcherrimus* is a new alpine Thistle, while such as *Cypripediums* in variety, *Mertensia primuloides*, *Linum alpinum* (blue), *Gentians*, *Silene Hookeri*, *Sisyrinchium bermudianum* (fine blue mass) and *Primula Unique Yarm* variety will all be found in excellent condition. *Polygonum sphærostachyum* is in capital colour.

Very choice and good is the rockwork exhibit set up by Messrs. Tucker and Sons, Oxford, the firm employing the limestone of their own locality, which is both ornamental and good. This exhibit teems with choice things, and much time might be spent among them. Quite among the best are *Daphne alpina*, *Tanakaë radicans*, *Dianthus callizonus*, *Eryngium glaciale*, the true *Saxifraga valdensis* (which is also in flower), *Phlox Douglasii*, *Pratia Arenaria*, *Silene Hookeri*, *S. Veselesky* (a choice morsel in white), *Campanula Allionii*, *Daphne rupestris*, *Origanum Dictamnus*, with *Sempervivum rubricundum*, *S. arachnoideum rubrum* and *S. a. Laggeri*, are all worth seeking out.

The excellent exhibit arranged by Mr. J. Wood, Boston Spa, Yorkshire, represents as a whole a bit of Yorkshire fell land, the stone grey Yorkshire mountain limestone supporting its own moss and such British wildings as *Thymus Serpyllum*, *Sedum anglicum* and the like. These are augmented by the choicer alpine plants, Snapdragons, Forget-me-nots, *Potentillas*, Himalayan Poppies, Primulas, Saxifrages, Phloxes and other plants galore. The foreground of the arrangements in effect represents an alpine meadow, in which the choicest alpine plants, Primulas, Orchises and others are seen. Then, in the characteristic drift-like form in which this rock appears in Nature, we see Nature adorned, improved, as it were, by the master's art. Crevice and cranny and fissure are freely planted with

Ramondias, *Haberlea*, and Pyrenean Rockfoil (*Saxifraga longifolia*), whose great, hoary rosettes are very telling. In the driest places, *Sempervivum tomentosum* looks at its best, a great stretch of *Saxifraga Aizoon rosea* representing this plant finely. The pretty American Pine Barren (*Pyxidantha barbulata*), spangled with white flowers, is very charming. Anon, a Fern-planted gully is very cool-looking, while in plenty appear the choicest Primulas, with rivulet and tiny pond, while high above all, suggestive of distance, towered, as it were, the dwarf Pines, mirroring into life a very beautiful whole.

Another fine rock garden exhibit in the open is that of Messrs. Piper, Bayswater and Barnes, in which some thirty tons of selected Cheddar stone are employed. The general arrangement is that of raised mounds, with bays, ravines, and outcrop rock from turfy banks appearing in excellent fashion, the latter throwing into fuller relief the grey colour of the adjacent rocks. In every way it is an excellent piece of work. The general planting idea is that of free drifts, the natural bent of the rocks being duly considered. In this way such things as *Ramondias*, the great silvery Pyrenean Rockfoil, *Daphne Cneorum*, *Fabiana imbricata*, *Erinus*, *Stachys corsica*, *Phlox Laphami*, *Viola Golden Wave*, *Saxifraga Aizoon rosea*, *Pratia Arenaria* and *Scutellaria indica japonica* are seen. Of shrubs, *Cotoneaster congesta*, with *Pinus Cembra* above, are noticeable.

Under canvas there is also to be found many choice contributions to the alpine section. Here will be found Messrs. Bees, Limited, Liverpool, who are staging many choice plants of recent introduction. Of these *Roscoeia cautloides*, *Primula secundiflora*, *Oxalis adenophylla*, *Primula augustidens*, *P. japonica Garnett Bee*, *Potentilla fruticosa nana argentea*, *Lewisia Howellii* and, perhaps rarest of all, *Didissandria amabile*, a new Chinese alpine, with erect bell-shaped, creamy flowers on a short inflorescence above woolly *Ourisia*-like leaves. It is a remarkably pretty plant.



VIEW IN MESSRS. J. CATTIE AND CO.'S FORMAL GARDEN



ROCK GARDEN EXHIBITED BY MESSRS. R. WALLACE AND CO.

Messrs. Backhouse and Sons, York, have a table exhibit of alpine plants with rockwork in miniature. Here will be found not a few of the choicer plants—*Orchis foliosa*, *Trilliums*, *Primula secundiflora*, *Iris cristata*, *Ramondias*, *Gentiana verna*, *Ledums buxifolium* and *polifolium*, *Onosmas*, *Dendromecon rigidum*, *Edraianthus serpyllifolium major*, *Viola bosniaca*, *Oxalis enneaphylla* and other good plants. The exhibit is very daintily arranged.

The Lissadell *Primulas* from Sligo are very good, and choice hybrids and improvements abound. This is a very bright-looking lot.

In another direction Sir Everard Hambro, K.C.V.O., Hayes Place, Kent, has a fine setting of choice alpine plants amid plumes of the bolder *Saxifrages*, *S. Cotyledon* and *S. longifolia* forms more particularly. The white, faintly spotted plumes of these rise in their dozens, while constituting the groundwork are some of the choicest morsels of alpine vegetation; for example, *Erinacea pungens*, the finest example we have seen, full of dainty mauve Pea-shaped flowers on a tiny bush 6 inches high. It is a gem. *Dianthus alpinus*, *D. subacaulis*, *Primula Unique*, *Lewisia Howellii*, *Phyteuma comosum*, *Jankea Heldreichii*, *Haberleas*, the brilliant red-flowered *Pentstemon Davisonii*, *Heeria elegans*, *Silene Hookeri* and *Oxalis enneaphylla rosea* are some to be searched for.

Mr. H. Hemsley, Crawley, has a miscellaneous lot of alpine plants and a new race of alpine Snapdragons.

The Ightham Alpine Plant Nursery is staging *Violetta Slieve Donna*, a charming alpine, in which the firm are specialists.

ROSES.

The Chelsea Show without Roses would be shorn of much of its splendour, and although, generally speaking, we have seen finer individual blooms, yet one must admit that there are some very meritorious groups. Each recurring year accentuates our indebtedness to the Rambler and Polyantha sections for spectacular effect, and the grand pot-grown specimens show us what can be done with such Roses when suitably planted

outdoors. There is this much about the Chelsea Show: one is not painfully reminded of cramped space as was the case at the Temple, and exhibitors take full advantage of the improved conditions to display their productions to the best advantage. One or two glaring examples of clashing groups are evident, especially the placing of a huge mass of Zonal *Pelargoniums* between the two fine groups of Roses put up by Messrs. W. Paul and Son and Messrs. Hobbies, the glare of the *Pelargoniums* absolutely marring the beautiful effect of the Roses.

From a decorative point of view, nothing is better done than the group of Messrs. W. Cutbush and Sons, Highgate. This consists entirely of Rambler and Polyantha Roses. A splendid central column of Dorothy Perkins has a ground-

work of the gorgeous Polyantha *Erna Teschendorff*. Then there are mounds of Polyanthas of such sorts as *Jeanne d'Arc*, *Maman Turbat*, *Jessie*, *Mrs. Cutbush*, *Orleans*, and *Ellen Poulsen*, with a contrasting and well-flowered weeping Rose emerging from the mound. As a groundwork for the group there are some hundreds of plants of the dainty *Baby Tausendschön*, whose correct name is *Louise Walter*. We also noticed a good yellow Polyantha in *George Elgar*.

Messrs. W. Paul and Son, as usual, make a grand display. Their Ramblers are excellently flowered. In this group are some fine plants of *Sodenia*, a very valuable new Rambler, a few shades deeper than *Lady Gay*. *Kalmia* is also a pretty novelty, of a colour resembling the shrub whose name it bears. The new *White Tausendschön* is fine, also *Ethel*, a very dainty shade of pink. *Millicent*, a new Rambler, is a large double flower, but of rather a dull, uninteresting colour. Probably outdoors this dulness would disappear; if so, it will be a good addition. Of the large-flowered Hybrid Teas, *Mrs. Charles Hunter* is fine, also *Portia*, *Ophelia*, *J. L. Mock*, *Mrs. A. Hammond*, *Margaret*, *Farbenkönigin*, *Sunburst* (fine blooms, but very pale colour), *Mrs. W. Christie Miller*, *Entente Cordiale* and *Souv. de Gustave Prat*.

Messrs. George Paul and Son, Cheshunt, have put up a splendid group, but we have seen them show much better. One must not lose sight of the fact that the weather this spring has been exceptionally trying for pot Roses. Fine pillars of *American Pillar*, *Hiawatha*, *Lady Godiva* and *White Dorothy* are in this group, with splendid weepers such as *Minnehaha*, *Eisenach*, *Hiawatha*, and *Lady Blanche*, a very pure white. Standards of *King George V.*, *Leslie Holland*, *Niphetos*, and *Mme. J. Dupuy* are tastefully set among masses of the best Hybrid Teas. Among these we noted a fine batch of *Freda* (a grand pot Rose, with fine deep flowers), *Florence Pemberton*, *Magnolia* (wonderfully long buds), *Lady A. Stanley*, *Cherry Ripe*, *Othello* (a grand colour), *Mrs. A. R. Waddell*, *Lady Q. Ewart*, *Sunburst*



THE ROCK GARDEN SHOWN BY MESSRS. PULHAM AND SONS.

(here also very pale), Comte G. de Rochmauer (a fine new red), Rayon d'Or, Lady Pirrie, Rene Wilmart Urban, G. Grunerwald, G. C. Waud, Queen of Spain and many others.

Mr. George Prince, Longworth, has made a brave display with some excellent Ramblers, well flowered and of elegant shape. We noticed among the great variety of Ramblers a fine new sort named Chatillon, a Rose larger than Dorothy Perkins, and a most exquisite shade of light pink. Among the choice collection of cut blooms to be seen are some of the beautiful Mme. Edouard Herriot, a Rose whose wonderful colouring is sure to make it a popular favourite.

Messrs. G. Mount and Sons, Canterbury, are making a most sumptuous show—one of the best in the whole exhibition. A splendid background of Crimson Ramblers, such as Excelsa and Hiawatha, lend a very rich glow to the group, and this gives a fine array of colour and serves to bring out the snowy purity of the lovely Frau Karl Druschki, grown as the firm only can grow it under glass. Delightful masses of Sunburst, Richmond, Mrs. John Laing, Mrs. Sharman Crawford and the superb Mrs. George Sawyer are here seen in large quantities of really exhibition blooms. Other popular sorts well represented are Lady Pirrie, Melanie Soupert, Mrs. F. Straker, Lady Battersea, Mrs. Charles Hunter, Joseph Lowe, Liberty, and Mrs. A. R. Waddell, the whole edged by well-flowered dwarf pot plants of the Perpetual Crimson Rambler.

Messrs. Low and Co., Enfield, have a group of Roses with other subjects. The Roses are lightly arranged and are beautifully relieved with Acer Negundo variegata and variegated Euonymus. Some fine specimens of Excelsa, Dorothy Perkins, Blush Rambler and Tausendschön are exhibited as pillars, while well-flowered weepers of Hiawatha and Newport Fairy portray these fine sorts to perfection.

A very tastefully arranged group comes from Mr. Charles Turner, Slough. There are grand weepers of Dorothy Perkins, Lady Godiva, White Dorothy, Lady Gay and Ethel (a very lovely new Rambler all should plant), and there are also fine groups of Orleans Rose, Annie Müller, Jessie and Mrs. Cutbush, besides standard Teas and Hybrid Teas, the whole well toned down by Japanese Maples and Ferns. In the superb group of flowering shrubs we noted a fine specimen of Rosa Hugonis, doubtless grown outdoors, for it is now blossoming outside with us.

Strangely, among all the rock garden exhibits we did not see any Roses represented. Surely this was an omission, for there are some lovely gems, such as R. Malvi, now opening outdoors that make beautiful rock subjects.

Messrs. Hobbies, Limited, Dereham, put up two groups in their own inimitable style, with arched walks well clothed with Ramblers, and huge baskets of Polyantha Roses, many of them of the firm's own raising. Among these we saw Baby Elegance (a dear little Rose that will be largely wanted), Meadowsweet and Dewdrop, all being interesting additions to this popular class. Cut blooms of the leading Roses are tastefully arranged on stems, and these include the wonderful Mme. E. Herriot (of grand colouring), Countess of Shaftesbury, Willowmere, Sunburst, Lady Hillingdon, Mrs. A. Ward, Melanie Soupert, and Marquise de Sinety, altogether a delightful group. We must not forget to mention Effective, one of the most fragrant Roses, and a variety of better colour when grown outdoors.

Messrs. Burch, Peterborough, have a nice little lot, chiefly in show boxes, representing most of the leading varieties.

Messrs. Frank Cant and Co., Braiswick Nursery, Colchester, have one of the best arranged groups among the cut-flower exhibits. There is a delightful airiness in the whole display that cannot fail to charm visitors, and they should see this group before it fades. A beautiful new Rambler is Braiswick Charm, an almost perpetual variety, reminding one of Alberic Barbier, but the flowers are produced in larger clusters. It is also very sweet. Hercules is a most sweetly fragrant Hybrid Tea of merit, and of a lovely peach pink shade, and very double with cupped form. The Ramblers and short standard Roses are grand, the latter being of the variety Jessie, perhaps the best to grow in this form. The cut blooms are of special quality, some quite medal blooms, and of the best we noted Mrs. Walter Easlea (a fine, big flower, of delicious fragrance), George Dickson (grand), Mrs. Muir McKean, Mrs. A. Coxhead, Melody, Mrs. J. Welch, Lady Roberts, Juliet, &c.,

so freely, it will be possible for every grower to have new sorts, but unless hybridised it is doubtful if we shall obtain anything superior to those now grown, although there is always a chance of getting a good thing.

Messrs. R. J. Barnes and Son, Malvern, are showing American Pillar very finely, also Rayon d'Or as cut blooms. These are very good.

Messrs. A. Dickson and Sons, Newtownards, have some of their superb novelties. What a beauty is Chrissie McKellar, a glorious garden Rose of most enchanting tints! Red Letter Day is a grand mass of colour, and Killarney Brilliant splendid. One bloom of Mrs. Bryce Allan portrays a real gem, and for fragrance we know of nothing equal to it. A beautiful seedling reminds us of Marquise de Sinety and Sunburst, and will be warmly welcomed when sent out. Lady Dunleath, Carine, Irish Fireflame and Mrs. S. T. Wright are also grandly exhibited.

Messrs. B. R. Cant and Sons have a most delightful array, and one could almost imagine one were at the National Rose Show in July, so sumptuous



STRATIFIED LIMESTONE TASTEFULLY ARRANGED BY MESSRS. WHITELEGG AND PAGE.

while such lovely singles as Rosa sinica Anemone, Austrian Copper and Austrian Yellow are well represented.

Mr. E. J. Hicks, Twyford, has a very lovely group, in which we noted Mrs. E. Alford, a glorified Mme. Abel Chatenay. If this Rose grows well outdoors it may supersede that grand old Rose, but it will have to be of superior habit to do this. Lady Hillingdon, Mrs. G. Sawyer and Richmond are also fine, well set off by masses of Erna Teschendorff, Mme. E. Herriot and Orleans Rose.

Messrs. H. B. May and Sons, Edmonton, have Roses represented among their other subjects, these chiefly of the Rambler and Polyantha sections.

A new Polyantha is shown by Messrs. Munch and Haage. It is named Betsy Van Nes, and is said to be a red Mrs. W. H. Cutbush, and may probably supersede Jessie outside, although as shown we did not think much of it.

Mr. J. Crouch, Lower Edmonton, exhibited several seedling Polyanthas, but none of them superior to existing kinds. As these Roses seed

is the variety and superb the quality. The ramblers are splendidly flowered, and among these Goldfinch, American Pillar, Lady Godiva and Silver Moon are grand. Fine masses of Lady Reay, Mme. Edouard Herriot, Mme. A. Chatenay, Mrs. H. Stevens, Lady Hillingdon, Elizabeth, Molly Sharman Crawford, Austrian Copper, Duchess of Wellington, Claudius, St. Helena, &c., are also shown.

STOVE AND GREENHOUSE PLANTS.

Messrs. Sutton and Sons, Reading, excel on this occasion, staging a particularly handsome and attractive exhibit in the centre of the Large Tent. This exhibit consists of five large beds—four corner ones and a circular bed in the centre. As a whole this display makes a complete garden in itself. Their excellent strain of Cineraria stellata is one of the chief features, the colours and form of the flowers leaving nothing to be desired. The Schizanthuses are really superb.

the beautiful tones of colour represented in the Reading strain of these plants being charmingly varied and attractive. *Primula obconica* has never been better shown. The splendid quality of the plants and their beautiful and varied colours show how great has been their development. Of herbaceous *Calceolarias*, too much cannot well be said in praise of their beautiful condition

great show and of the name of Messrs. James Carter and Co., who have done so much for these flowers.

Groups 39, 40 and 43 in the Large Tent are represented by a series of beautiful plants from Messrs. Webb and Sons, Wordsley, Stourbridge. The plants are arranged in bold and striking form, rising to a height of about eight feet.



GROUP OF ROSES SHOWN BY MESSRS. WILLIAM PAUL, WALTHAM CROSS.

and their superb quality. Intermediate tones of colour are conspicuously good, and the plants are in the pink of condition. The centre bed is filled with *Clarkias* and an edging of *Cineraria* Reading Gem, the latter being a plant midway between the ordinary type and *C. stellata*. Stocks, *Nicotianas*, *Phloxes* and *Alonsoas* are also extremely well done, the plants representing strains of the highest excellence. A finish to this great exhibit of Ferns and other foliage plants makes one of the most attractive floral treats of the show. In another part of the Large Tent a beautiful group of *Clarkias* from this firm is a most commendable display.

Another very wonderful display is made by Messrs. James Carter and Co. On entering the Large Tent from the Embankment entrance the visitor is face to face with a wonderfully comprehensive and beautiful series of groups of greenhouse flowers. The plants are in the pink of condition, each subject being represented by flowers of the best, the colours also being very good. A great circular bank of *Cineraria stellata* and *Cactus* varieties, surmounted by a beautiful Palm, is the central feature of this wonderful display, and this is surrounded by other circular mounds of *Empress Elizabeth* (rose pink) and *White Queen* (pure white) Ten-week Stocks, *Gloxinias* (Invincible Prize), *Calceolarias* (Victoria Prize), *Petunias* (Queen of Roses, Purple Prince, Crimson King and White Pearl), *Schizanthus* (large-flowered Butterfly varieties), *Clarkia elegans* in exceptionally good form and remarkable for their very high colouring, large-flowered *Cinerarias* (Brilliant Prize), handsome *Streptocarpuses* and *Nemesias* (Orange Prince), which all combine to make an exhibit worthy of this

Herein are displayed beautiful examples of their superb strains of large-flowered *Cinerarias* and well-grown, freely flowered examples of the *stellata* and *Cactus* forms of these free-flowering plants. *Schizanthuses* are also well done, their compact hybrid *retusus* and *pinnatus* forms all being most attractive. Exhibition *Gloxinias* are well represented, and double-flowered *Begonias* are also in good form and condition. Not the least interesting are the representatives of *Primula obconica* and *P. malacoides*. Superb aptly describes the large-flowered herbaceous *Calceolarias*, the flowers being pleasingly varied. Hybrid *Streptocarpuses*, *Nemesia strumosa* and single *Clarkias* are a trio of beautiful plants deserving notice, and the choice seedling *Amaryllis* add a glorious piece of colouring to this fine exhibit. *Petunias*, both double and single flowered sorts, are attractive, as are the Ten-week Stocks. With *Grevillea*, robust Ferns and other foliage plants a pretty finish is given to this magnificent display.

Mr. Philip Ladds, Swanley Junction, Kent, displays a bright and highly attractive group of Zonal *Pelargoniums*, Ivy-leaved *Pelargoniums*, *Fuchsias*, *Heliotropes*, show and fancy *Pelargoniums* and magnificent *Hydrangeas*. *Mme. Moullière*, the new large white variety, has never been seen in better form and condition, and *Hortensis* is also well shown to contrast with the new white sort above mentioned. With Maidenhair and other Ferns a beautiful finish is given to this large group, which is most successfully set up in undulating fashion.

Zonal *Pelargoniums* as set up by Messrs. H. J. Jones' Nurseries, Limited, Ryecroft, Lewisham, S.E., are very fine. The large circular group, covering some 300 superficial feet, is filled with

well-grown plants carrying grand trusses of bloom in every tone of colour known in these plants. A few of the better sorts are *Pandora* (scarlet), *Will* (clear scarlet, very large pips), *Fred Gulliver*, *Mrs. Tom White*, *Harry*, *Fred Bunstead*, *Kitty*, *H. J. Jones*, *Harry Wood*, *Mrs. Fred Huggett*, *Mrs. Gulliver*, *Edgar A. Tickle* and a host of other good things, both double and single. The group is edged with Ferns and surmounted by a graceful Palm.

Messrs. James Veitch and Sons, Limited, Chelsea, fill a square with a series of five beds, with grass walks between. The central bed of circular form is filled with beautiful *Azaleas*. Here are to be seen grand plants smothered with delicate blossoms in many hues, all in the pink of condition. *Mme. Keller*, *Empress of India*, *Professor Wolters* (grand), *Mme. J. Vervæne*, *Charmer*, *Dr. Moore*, *Mme. Van den Cryssen*, *E. von Eeckhaute* and *Mme. Morreau*, among many other good varieties, make a glorious display. Two corner beds are filled with well-grown *Caladiums*, well coloured and in grand form. Noteworthy examples are *Le Resplendent*, *Lady Stafford Northcote*, *Prince of Wales*, *Mme. John Box*, *Triomphe de Comte*, *W. Rappard*, *Emperor Alexander III.*, *The Mikado* and many others. Stove and greenhouse plants proper fill the other two corner beds, and they comprise a wonderful assortment of beautiful plants. *Alocasia mortefontainensis*, *Gymnogramma schizophylla*, *Maranta insignis*, *Coccoloba pubescens*, *Phyllotanium Lindenii*, *Dieffenbachia Jenmanii*, *Croton Reidii*, *Alocasia argyrea*, *Sansevieria Laurentia*, *Dracæna goldieana*, *Ananassa sativa variegata*, *Cannas*, *Anthuriums* and a wonderful array of most beautiful subjects make this exhibit one of the features of this great show.

Amaryllis from Messrs. Ker and Sons, Aigburth Nursery, Liverpool, make an effective exhibit. The flowers are large and beautifully fresh, and comprise a large and varied assortment of colours. A few sorts worthy of special mention are *Sappho*, *Pink Gem*, *Fascination*, *Endymion*, *Crimson King*, *Orange Perfection* and *alba magna*. Interspersed with moss and Ferns the effect is pleasing.

Mr. J. J. Ward, Rocklands, Finchley, N., has a table group of herbaceous *Calceolarias*, the plants of which would have been in better condition a week or ten days hence. Some of the plants are in condition, and represent a good strain.

Magnificent *Schizanthuses* from Mr. Ernest G. Mocatta, Woburn Place, Addlestone, Surrey (gardener, Mr. Thomas Stevenson), are remarkable for their good quality. The plants are densely flowered, the quality of the blossoms of a very high order, and their colours are charmingly diversified. We have never seen better, and they are just at their best. There are thirty-eight plants in all, and a finish was given to this highly meritorious group with well-grown *Hydrangeas* and Maidenhair Ferns. The plants are described as *Schizanthus wisetonensis* *Excelsior* strain.

Hydrangea hortensis in beautiful variety is shown by Mr. Leopold Salomons, Norbury Park, Dorking. This is a very fine exhibit. The plants are at their best, and the colouring is superb. This table group is neatly finished with Ferns and *Panicum variegatum*.

Zonal *Pelargoniums*, both double and single flowered sorts, are shown by Messrs. Jarman and Co., Chard. This firm also stages the new *Centaureas*, *Viola cornuta* in variety and other subjects.

Handsome bunches of Zonal *Pelargoniums* are exhibited by Mr. Vincent Slade, Taunton. About

three dozen bunches are shown, embracing quite a number of the better sorts. Dublin, Vesta, Lady Wilson Todd and Naples are striking varieties.

A new Fern, *Adiantum gloriosum* Lemkesii, is shown by Messrs. Lemkes and Son, Alphen, Holland. This is a very beautiful plant, and is worthy of a place in all collections of stove and greenhouse plants.

A splendid group of *Streptocarpus* hybrids is put up by Mr. Henry B. Brandt, Capernor, Nutfield, Surrey (gardener, Mr. H. Cook). The flowers are large and their colours pleasingly diverse, and the group as a whole is much admired.

A pretty table group of show and fancy *Pelargoniums* is exhibited by Mr. A. P. Brandt, Bletchingley Castle, Surrey (gardener, Mr. J. W. Barks). This is a very pretty group. The plants are profusely flowered, and the quality of the flowers is superb.

A splendid table group of large dimensions is staged by Messrs. John Peed and Son, West Norwood, London, S.E. This comprises *Streptocarpaceus* in wonderfully pleasing variations of colour, and a capital lot of *Begonias*, also very varied in their colours and marking. The latter are especially noteworthy.

Calceolarias, herbaceous and otherwise, are well shown by Mr. A. H. Cole, Swanley, Kent. This is a very charming feature, and the strain a good one. A few fancy *Pelargoniums* are also shown by this grower.

A grand bank of herbaceous *Calceolarias* is exhibited by the Rev. H. Buckston, Derby (gardener, Mr. Shambrook). The plants are large, well-grown specimens, and are some of the very best in the whole show. Good culture is largely in evidence.

In the Long Tent, Messrs. James Veitch and Sons, Limited, Chelsea, have two table-end groups of Ferns, Fuchsias, *Spiræas*, *Primulas* in variety and a number of other useful plants, all of which are most interesting. The Fuchsias are trained in cordon form and are in splendid form and condition.

Messrs. H. Cannell and Sons, Eynsford, Kent, have an excellent exhibit of large and handsome bunches of Zonal *Pelargoniums* and a number of small plants of the better fancy *Pelargoniums*. The Zonals are very striking, *Lucania*, *Frogmore*, *Arabic*, *King Victor*, *Queenswood*, *Lady Roscoe*, *Princess of Wales* and *Mars* being some of the more noteworthy singles.

From the John Innes Horticultural Institution came a pretty table group of *Calceolaria* hybrids. To those anxious to improve these flowers there is much food for reflection to be found here.

Messrs. W. Cutbush and Son, Highgate and High Barnet, N., have a wonderfully interesting group, comprising miscellaneous plants. The arrangement of the different subjects leaves nothing to be desired—*Hydrangeas*, *Rhododendrons*, hardy *Azaleas* and *Cytisus* in variety, *Spiræa* and *Coleus* James Atfield (very noteworthy). There is much for all who are interested in these plants to profit by in this very charming group.

A grand lot of *Hippeastrums* (Veitch's hybrids) make a striking table group as set up by Messrs. James Veitch and Sons, Limited, Chelsea. They are a very fine lot, and are graded in colours. The quality is superb, colour, size and general condition impressing visitors in a very marked degree. From the same firm *Calceolaria Clibranii* and *Begonia Rex* in beautiful variety make a somewhat unique exhibit. The *Calceolarias* are

freely flowered, and are most striking. The *Rex Begonias* are novel and fascinating in a measure. The better sorts are *Morning Rise*, *Our Beauty*, *Frau G. Benary*, *His Majesty Rostoff*, *New Beauty*, *The Queen*, *Rex Rubrum*, *La France*, *Mrs. F. Sander*, *Ernst Benary*, *Masterpiece* and the extremely beautiful *Countess of Thellusson*. Two very large triangular groups in the Large Tent serve to display the mollis and Ghent *Azaleas*. This firm's exhibits are always a splendid feature of this great show, and this year they seem to have eclipsed all previous efforts. In the mollis section the plants are gloriously fine. The rich and beautiful colouring and the fragrance of this subject are most attrac-

tive. Ferns, and a variety of other subjects which combine to make a truly remarkable exhibit.

An extremely handsome group of *Schizanthus* is exhibited at the Embankment entrance to the Large Tent by Mr. Alfred J. Waley, Stone House, Reigate, Surrey (gardener, Mr. W. A. Dobson). Seldom have such remarkable specimens been seen, and the grower of this wonderful collection of plants deserves great praise. The plants are large, very freely flowered and the colours superb.

Mr. William Iceton, Putney, S.W., exhibits a splendid circular group of *Lily of the Valley* of a very improved form. This is superbly fine, and a source of great joy to many. Edged with



A CORNER OF MESSRS. SUTTON AND SONS' EXHIBIT, SHOWING FINE PLANTS OF *PRIMULA OBCONICA*.

ive. The better sorts are *Flambeau*, *Mme. Mayer*, *Comte de Quincey*, *J. C. van Thol*, *Imperial*, *Leon Vignes*, *Alphonse Lavallée* and a host of other good things. The Ghent *Azaleas* in the second group are quite fascinating, and it is a good thing to have the two sections divided as they were on this occasion. The better sorts are *coccinea speciosa*, *Fanny* (single), *Pucella* (single), *Daviesii*, *Pallas*, *Guelder Rose* and *occidentalis*.

A charming circular group of the lovely *Schizanthus* is exhibited by Mrs. V. A. Litkie, Clarefield, Pinkneys Green, Maidenhead (gardener, Mr. W. Hulbert). These are very large plants, flowering in the greatest profusion, in wonderful variety and in beautiful colourings. There are many truly grand things in this group, and the grower deserves much credit for his display.

Show, fancy and scented-leaved *Pelargoniums* are nicely shown by Messrs. Godfrey and Son, Exmouth, Devon. Interspersed with Ferns, the effect is quite pretty, and the varieties of the *Pelargoniums* of the best.

In a wonderfully comprehensive group round the Obelisk, Messrs. John Piper and Sons, Barnes, Surrey, exhibit a wonderful array of different subjects. *Azaleas Hinodegeri* and the *Silver Acer* cover the Obelisk, and round about are *Hydrangeas*, *Primula obconica*, pygmy Japanese

Maidenhair Ferns and *Dracæna Sanderæ*, the effect is very pleasing.

A pretty group of *Caladiums* is shown by Mr. L. R. Russell, Richmond. The plants are arranged in rather flat fashion and not so large as some others, but they are very fresh, clean and nicely coloured.

Indian *Azaleas* are shown by Mr. Charles Turner, Slough, in numerous plants trained in pyramidal form. They are an attractive lot, and take us back to the time when specimen *Azaleas* used to be shown at the Ghent flower exhibitions. This is a welcome feature of this great show.

Sarraceni are set up in natural fashion in a very attractive group by Mr. A. J. A. Bruce, Chorlton-cum-Hardy, Manchester. Pools and a mossy groundwork and rockwork to match make these plants at their best. With *Bamboos* and *Grasses* in association, we regard this exhibit as one of this firm's best efforts.

A miscellaneous group, comprising a variety of subjects, is set up by Messrs. Stuart Low and Co., Enfield. The *Bottle Brush Tree* (*Metrosideros floribunda*), *Azalea rosaflora*, *Hydrangea hortensis*, *Ceanothus Veitchii*, *Gerberas* and the new *Araucaria*, *Silver Queen*, are a few of the noteworthy subjects in this display.

A mixed group of a very commendable kind is staged by Messrs. H. B. May and Sons, Upper Edmonton. Heliotropes, Verbenas, Zonal Pelargoniums, Weeping Roses, Salvias, Lobelias, Fuchsias and numerous other plants all combine to make a beautiful exhibit.

A bold and massive-looking group of Caladiums comes from Messrs. John Peed and Son, West Norwood, S.E. The plants are well grown, but should have been raised somewhat from the ground-work of Ferns, &c. Some of the better plants are Mme. J. Box, Triomphe de Comte, Excellent, C. E. Dahle, George Gover and a wonderful series of plants with telling foliage.

Part of a large group set up by Mr. James Horlick, West Dean Park, Chichester (gardener, Mr. W. H. Smith), comprises a wonderful display of yellow Callas in the pink of condition. The species is *Calla Pentlandii*, and we doubt whether a finer lot of these plants has ever been seen.

Messrs. Barr and Sons, Covent Garden, W.C., make a fine exhibit of Japanese pygmy trees. There is a very charming assortment, the ages

Andrew Tweedie (cream), Countess of Dartmouth (cream, edged and flaked rose), Hon. Mrs. Ronald Greville (cream) and Hon. Mrs. Maurice Glyn (apricot).

Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath, set up an inimitable group of tuberous-rooted Begonias in quality of the most superb description. Seldom is the British public treated to such a wonderful representation of these beautiful flowers. Without a single exception the blooms are of the highest quality, and represent the last word in these gorgeous flowers. Noteworthy sorts are Princess Victoria (salmon pink), Lord Methuen (bright scarlet), Rose Superbe (pale rose), Lady Carew (deep rose), Violet Langdon (flesh pink), Irene Gambling (orange), Lady Cromer, Mrs. James Reid (lovely pink), Empress Marie (white) and Mrs. James Douglas (yellow). These are just a few of the wonderful things in this group, and gives this firm the high position they have won with these plants.

A charming bank of tuberous Begonias, rising to a considerable height at the back, is staged

although they may not be able to produce flowers at so early a date. As is well known, some acres of glass are devoted to Sweet Peas for market purposes, and from about mid-April one sees blooms of varying quality in the florists' shops. The various Sweet Pea specialists likewise devote a considerable amount of glass to this crop, and in doing so they benefit materially by being enabled to exhibit long before the natural period of blooming, while they also are able to ensure a more or less good crop of seed of the more valuable varieties.

Messrs. Dobbie and Co. of Edinburgh were among the first to realise the importance of indoor culture, and after several tests in the ordinary houses originally installed at Mark's Tey, the firm some three or four years ago erected special large, airy houses solely for Sweet Peas. To say that these houses have justified themselves is hardly sufficient. Not only is the firm among the first to exhibit each season, but the quality is rarely matched and never surpassed. On this occasion the firm cover 150 square feet, the vases arranged in three tiers and backed by the well-known black velvet screen. It is impossible for us to attempt to enumerate anything like the whole of the varieties shown, so we must be content to mention the most new and notable. An outstanding novelty is Dobbie's Orange, a gorgeous orange salmon of great size. A veritable flame. Royal Purple is assuredly one of the great things for 1915, a giant purple self different to anything we have had before, even in the days of the old grandifloras. It may not be everyone's colour, but still it is a coming variety. Alfred Watkins is a peculiar greyish lavender of a very even shade. Frilled Pink, another novelty of great promise, impresses one by its intense frilliness, while its colour is a clear bright pink. It is a most advanced type of Spencer. Duchess of Portland, a delightful cream pink of great size, is another new-comer, while Norma is a superb orange salmon cerise of huge proportions. Several seedlings, including a white and an intense orange, we noted, while among the standard sorts May Campbell, Thomas Stevenson (nearly all fours this), Lady Miller, King White, New Marquis, and Edrom Beauty are in strong evidence.

Messrs. E. W. King and Co., Coggeshall, make an effective display, the stand being tastefully decorated with Smilax and other foliage. Kathleen makes a brilliant patch of colour, while James Box impresses one by the doubling of its flowers. This is certainly one of the leaders in the salmon section. Anglian Blush is a novelty of promise; Anglian Cream Duplex is striking by its strong colour and tendency to double; and Morning Mist may be termed a Walter P. Wright on a cream ground. Other notable varieties are Anglian Fairy, Anglian Royalty, Anglian White and Queen Mary. Several of the varieties shown were cut from the open ground.

A very clean exhibit is that by Mr. J. Stevenson, Wimborne, and while the number of varieties is not extensive, several telling blocks, including Thomas Stevenson, Bertrand Deal, Prince George, Agricola, R. F. Felton, and Hercules we noted. These for the most part are set up in Bamboo pillars, the length of stem in some instances being very great.

Mr. James Box, Lindfield, differs from the other exhibitors by setting up a group of plants in the Large Tent; as all the plants are in 6-inch pots, it naturally follows that the flowers are not over-large. Nevertheless, they are interesting, and



SOME OF THE BEGONIAS SHOWN BY MESSRS. BLACKMORE AND LANGDON.

of the trees ranging up to 200 years old. Most of the trees are in excellent form and condition, showing evidence of considerable care and attention.

BEGONIAS.

Messrs. Thomas Ware and Co., Feltham, Middlesex, have a grand table group of their magnificent tuberous-rooted Begonias, in which large and handsome double-flowered varieties predominate. Marvellous advance must be chronicled with these gorgeous flowers, form and colouring now being all that the connoisseur could well desire. The plants are in excellent condition for so early in the year, flowering freely and carrying superb examples of cultural skill. Among the more noteworthy additions this season are King George V., a very large and handsome flower of good form and rich salmon colour; and Duchess of Marlborough, a lovely rich salmon pink of high quality. Other good things worthy of special notice are Gladys Valentine (pale salmon), Mrs. Maurice Pope (salmon rose), Mrs.

by Mr. A. Ll. Gwillim, Sidcup, Kent. These are all double-flowered sorts and represent many of the better-known varieties. Lady Cromer, Mrs. J. C. Gwillim, Miss Ada Britten, Sidcup Beauty and Mrs. H. Harris are especially noteworthy sorts.

SWEET PEAS.

It is but a few years since Sweet Peas first made their appearance at the Royal Horticultural Society's spring shows, and while the quality was not actually impressive, the flowers, nevertheless, caused a mild commotion. Nowadays, however, we not only look for Sweet Peas in May, but we expect quality equal to the best that the month of July will produce, and, what is more, we get it. The advance in the art of Sweet Pea growing under glass is little short of miraculous, and those who are familiar with the blooms produced in this country and the United States, the home of Sweet Pea forcing, assure us that the home growers more than hold their own,

demonstrate that Sweet Peas can be grown even in small pots. A great number of varieties are staged.

Messrs. S. Bide and Sons, Farnham, elaborately stage a fine collection. All the varieties are set up in glass vases, under a white-roofed erection, the effect being distinctly good. The flowers are extremely strong, and several telling novelties are noted. Ruth Bide is an intense rosy salmon, much brighter than A. A. Fabius. Phyllis Bide should give the much-talked-of Robert Sydenham a severe tussle. Bide's Cream is deep in colour, while among other new varieties, Climax (deep rose), King Mauve, Blue King, King White and Phœbus stand out strongly. A really very striking exhibit.

An excellent display is that made by Messrs. Robert Sydenham, Limited, Birmingham, and here on this stand one is able to see that wonderful orange named after the late lamented Robert Sydenham. Grand blocks of Barbara, Inspector, Princess Mary, Thomas Stevenson, Maud Holmes, Margaret Atlee, Lilian and Lady Evelyn Eyre are all splendidly shown.

A small stand is put up by Messrs. R. H. Bath, Limited, Wisbech. The firm's new orange named Glow stands out strongly, while some excellent vases of Hercules, King White, La Belle Sauvage, King Manoel, James Box, Mrs. J. C. House, Afterglow, Florence Wright Spencer and Thomas Stevenson are among the remainder that are on view.

A very telling exhibit is that of Messrs. Sutton and Sons, Reading. Backed by a polished mahogany series of archways, the flowers are arranged in three semi-circular bays. Elaborate tall vase-holders of polished nickel are carrying the flowers that fill the spaces between the semi-circles. Robert Sydenham is well shown, while a superb new cream, unnamed, is also in evidence. Among others, Barbara, Royal Rose, Maud Holmes, Mrs. J. C. House, Thomas Stevenson, Margaret Atlee, Decorator, R. F. Felton, Inspector and Florence Wright Spencer all stand out prominently in this effective exhibit.

Taken collectively, the Sweet Peas are by no means the least important section in the exhibition, and the firms exhibiting deserve full credit for their efforts. Had more space been available, we believe more extensive exhibits could have been set up; but in conformity with the idea of the Royal Horticultural Society, exhibitors have refrained from duplicating the varieties, with the result that the visitors are able to view a large number of varieties on a comparatively small amount of space.

FERNS.

At the south-eastern entrance to the Large Tent, Messrs. H. B. May and Son, Limited, Upper Edmonton, N., have set up one of their renowned groups of choice Ferns. This is of a most representative character, and comprises many specimens of remarkable beauty. There are some seven hundred species and varieties, which will give the reader some idea of the comprehensive display made by this wonderful group. Specially noteworthy examples are *Adiantum grossum*, a novelty in Maidenhair Ferns; *Davallia solida superba*, one of the very finest specimens; *Pteris flabellata plumosa*, a feathered kind of the old South African species; and *Platycerium Cordreya*, a wonderful development in the Elk-horn Ferns. Of standard Ferns, *Nephrolepis Willmottæ* is quite the newest type of the Lace Fern. In the

hardy section a novelty worthy of note is *Polystichum gracillimum Drueryi*. This section is well represented, and to Fern-lovers should prove a source of considerable interest.

A pretty little table group of Ferns and cactaceous plants is shown by Mr. H. N. Ellison, West Bromwich. The Stag's-horn Fern (*Platycerium grande*) is very fine, and there are other interesting plants. Cacti are shown in great variety in small pots.

HERBACEOUS & BULBOUS PLANTS.

This department is well represented, many leading firms bringing of their best.

In the group from Messrs. Barr and Sons, Covent Garden, W.C., will be found a choice collection of *Ixias* and *Sparaxis*; of the latter Scarlet Gem is a notable sort. Then in *Iris susiana*, *Eremuri*, *Olearia*, *Cytisus*, *Androsace*, *Gentian* and *Oriental Poppy* the searcher after meritorious subjects has a wide choice. In this group, too, the green-

Messrs. George Jackman and Sons, Woking, have many showy things in *Delphinium*, *Pæony*, *Lily*, *Spiræa*, *Geum* Mrs. Bradshaw, the early *Gladioli*, *Oxalis enneaphylla* and other choice things. *Delphiniums* *Capri* and *King of Delphiniums* are very good.

Messrs. Wallace and Co., Colchester, have an amazing group near the centre of the Large Tent, the collection particularly rich in Japanese *Acers*, *Lilies*, *Irises*, *Ixias*, hardy *Orchids*, *Eremuri*, *Primula* and the like. Of the *Lilies*, such as *Martagon dalmaticum*, *myriophyllum*, *Krameri*, *venustum* and *macranthum* are all worthy of note, while the towering spikes of *Eremuri* will appeal to all.

Messrs. G. and A. Clark, Limited, Dover, are showing finely *Iris*, *Polyanthus* Cloth of Gold, *Incarvilleas*, *Pyrethrums*, *Geum* Mrs. Bradshaw and other showy flowers.

Messrs. George Bunyard and Co., Maidstone, have a fine display of hardy flowers, notably *Thalictrum dipterocarpum*, *Astilbe Ceres*, *Delphinium Cymbeline*, *Iris King of Iris*, *Eremuri*,



HERBACEOUS CALCEOLARIAS EXHIBITED BY MESSRS. E. WEBB AND SONS.

flowered *Ixia viridiflora* is very beautiful, and appeals by reason of its rare colour and quaintness. It is charming in the cut state.

Mr. James Box, Lindfield Nurseries, Hayward's Heath, is staging admirably *Primula*, *Spiræa*, *Pæony*, *Anemone*, *Incarvillea brevipes* and choice *Liliums*. Of these latter *L. Grayii* and *L. canadense* are very beautiful. A group of hardy *Cypripediums* adds interest to the whole.

Mr. Amos Perry, Enfield, is making a fine central display of Tree *Pæonies*, while about and around are collections of *Poppies*, *Irises*, hybrids of the *Regelio-cyclus* and *Korolkowi* groups and many interesting species. A new white *Poppy* here is very beautiful, if less sumptuous than some, while the new white *Marguerite*, *Chrysanthemum Leucanthemum fl.-pl.*, is interesting and good.

Mr. G. Reuthe, Keston, Kent, has an excellent group of things—*Crinodendron Hookeri*, *Rhododendrons* of the choicest sorts in bold array, *Irises* of the *Oncocyclus* and *Regelio-cyclus* sets, with *Primula*, *Celmisia*, *Olearia*, *Cypripedium* and other choice subjects. The *Rhododendrons* and *alpines* in this group are very beautiful.

Pyrethrum Mary Kelway, *Rhododendron* Pink Pearl, with *Ghent Azaleas* and other flowers.

Messrs. Phillips and Taylor, Bracknell, have a fine show of *Primulas*, *Auriculas*, *Anchusa*, *Iris*, *alpine* and other *Phloxes*, *Astilbe* Peach Blossom and the like.

Messrs. Gunn and Sons, Olton, Warwickshire are displaying *Phloxes* Frau A. Buchner, Elizabeth Campbell, Lord Curzon, Princess Royal and other fine kinds in their usual good form.

Messrs. Cutbush and Sons, Highgate, N., have some effective groups of *Incarvillea*, *Gaillardias*, *Iris lævigata*, *Primula japonica splendens* (a particularly good form) and *Liliums* in variety. A very pretty group.

Messrs. Ware, Feltham, have some excellent *Pæonies*, *Primulas*, *Pyrethrums*, with a good display of *Eremuri* and *Poppies*.

Messrs. Gibson and Co., Bedale, Yorks, have an effective lot of *Thermopsis fabacea*, *Astilbe* Queen Alexandra, *Lupines* and other showy flowers.

Messrs. Kelway and Sons, Langport, have some of their finer *Delphiniums*, Remarkable, Lemberg

and James William Kelway, *Pyrethrum Princess of Wales*, *P. Edward VII.* and *P. Lord Milner*, all of which are excellent.

Messrs. James Cocker and Sons, Aberdeen, have goodly groups of *Trollius Yellow Prince*, *Anemone alpina* and *A. sulphurea*. The *Trollius* in this group are most attractive.

Messrs. B. Ladhams, Shirley, Southampton, are showing *Erigeron hybridum* B. Ladhams, *Trollius excelsis*, *Campanula glomerata* Mauve Queen and *Thalictrum aquilegifolium superbum* in capital form.

Messrs. Lilley, Guernsey, have an exhibit entirely composed of the graceful *Ixias*, early *Gladioli*, *Calochorti*, *Watsonias*, Peacock Irises and other unusual flowers.

Messrs. Blackmore and Langdon, Bath, are showing in capital style *Delphiniums* Mrs. J. S. Brunton, Walter T. Ware, Queen Wilhelmina, Eva, Capri, Moerheimi and others.

Messrs. Rich and Co., Bath, are showing *Pyrethrum Queen Mary*, *P. Kleinholtz*, *P. Louisa*

sorts, to which section this grower chiefly devotes himself. A few of the more dainty *Violettas* at this early period are *Rock Orange* (a lovely rich yellow), *Rock Lemon* (lemon yellow, very sweet scented), *Eileen* (a dainty mauve blue with a grand habit), *Cecilia* (a deeper mauve blue), *Mollie* (rich yellow of charming form) and *Rock Blue* (a deep tone of purplish blue). These are charming plants for the rock garden.

Violas from Messrs. Seagrave, Sheffield, make an interesting display. A large number of sprays of blooms are set up in the orthodox fashion, embracing such sorts as *Marion M. Roberts*, *Dunbryan*, *Kathleen Howard*, *Kathleen Immortalité*, *Moseley Perfection* and *A. S. Frater*. A few lifted plants in front complete this exhibit.

Mr. George Underwood, Leicester, has a number of porcelain pans filled with very sweet and clean *Violas* set up on white stands—*Agnes Kay*, *Gladys Finlay*, *Bessie*, *Admiral of the Blues*, *Darkey*, *Moseley Perfection*, *A. S. Frater*, *Maggie Mott* and

CARNATIONS.

One of the many exhibits of Messrs. William Cutbush and Son, Highgate and High Barnet, is a very handsome group of Perpetual-flowering and Malmaison Carnations. These flowers are set up in this firm's inimitable manner in handsome vases, stands, &c., with a groundwork of plants in full blossom, interspersed among which are Ferns, &c., for effect. The more noteworthy varieties of the Perpetual-flowering section are *Mrs. McKinnon* (scarlet), the new *Lady Ingestre* (salmon pink), *Mrs. Fullerton* (mauve and cerise), *White Wonder* (white), *Mrs. Raphael* (salmon), *Marmion* (pink and white), *Crimson Glow* (a glowing crimson) and *Mrs. Tatton* (pink ground, flaked white). Of the Malmaison type the better examples are *Mercia* (salmon), *Lady Coventry* (scarlet), *Princess of Wales* (in grand form, pink), *Baldwin* (rose), *Nell Gwynn* (white) and the type. These all combine to make a most attractive display.

Carnations are now an inseparable adjunct of nearly every flower show. Ever since America sent us the Perpetual-flowering type they seem to have been growing in public favour. There are many enthusiastic growers who prophesy a much greater future, more especially since it has become known that nearly every variety does well as a summer bedding plant. The Perpetual Flowering Carnation Society has done much to bring the flower into prominence, and it goes without saying that such a huge show as that of Chelsea, with its enormous attendance, will do much to carry on the good work if the leading growers exert themselves to put their best before the public. That they have done this will be, we think, the unanimous verdict when the beautiful groups are visited. Some are arranged in the very large tent, where there is only the bare ground to start with; some in the smaller flower tent, where there is the usual orthodox staging. There are large groups, such as Mr. Engelmann's and Messrs. Stuart Low and Co.'s, and small ones, like those of Mr. E. J. Wootten and Mr. James Douglas. It will be, perhaps, more convenient for reference and for finding them if we take the different exhibitors according to the tent in which they are placed and touch upon some of the more interesting kinds which, we think, visitors will like to see.

Beginning with the Large Tent, and taking the different exhibitors in alphabetical order, we first of all come to Messrs. R. H. Bath of Wisbech, who among their many Tulips have one solitary Carnation; but one, if it is important enough, makes up for many. Premier, which we would describe as a deep primrose in colour, is a step on the road to the deep lemon yellow Perpetual, which now seems to be one desideratum of the Perpetual type.

Mr. Bertie E. Bell from Guernsey is famous for the way he grows Coronation, a striking rose, and British Triumph, a well-known and meritorious crimson.

On another table Mr. H. Burnett, who also hails from the same famous land of glass and flowers, has a grand exhibit, in which *Marmion*, the "Painted Lady" Malmaison; *R. F. Felton*, the large, deep pink; and *Mrs. Raphael*, the red Malmaison-looking Perpetual—or, should we say, the Perpetual red Malmaison?—are conspicuous.

In about the centre of the eastern side no one will fail to notice an exhibit quite apart from all the others in the style of its flowers. They are rounder, flatter-petalled, smoother-edged and, seemingly, of greater substance. Two lines from



MAY-FLOWERING TULIPS ARTISTICALLY STAGED BY MESSRS. BARR AND SONS.

Delbassale, *Geum Mrs. Bradshaw* and the pink-flowered *Pyrethrum Hamlet*, all in capital style.

Messrs. Frederick Smith and Co., Woodbridge, Suffolk, have some fine *Eremuri*, *Lupines*, *Heuchera* Edge Hall variety, *Astilbes* and other good things.

VIOLAS AND PANSIES.

An attractive exhibit of bedding *Violas* and a few of the better *Violettas* is set up by Mr. Howard H. Crane, Woodview, Highgate, N. The blooms are arranged in green-painted saucers of wet sand, and give a very good idea of the beauty of these free-flowering subjects. Some of the more noteworthy *Violas* are *Mrs. B. Eric Smith* (rich orange yellow), *Liuggi* (pale yellow, very large), *Swan* (white), *Cygnets* (lovely creamy white), *A. S. Frater* (white, edged blue), *Royal Purple* (effective royal purple), *Bridal Morn* (pale mauve blue), *Moseley Perfection* (enormous rich yellow) and a host of other good bedding

a number of beautiful sorts too numerous to mention.

Messrs. Gunn and Sons, Olton, Warwickshire, show numerous large baskets of *Moseley Perfection Viola*, seven baskets of *Viola cornuta purpurea*, and a few pans of *V. gracilis*. These are arranged as a table group with *Roses* as a background, and make an effective display.

Pansies and *Violas* are set up in pans by Messrs. Carter Page and Co., London Wall, E.C., and include such *Violas* as *Kathleen*, *Pembroke*, *Redbraes Yellow*, *Mrs. E. A. Cade*, *Virgin White*, *G. C. Murray*, *Olive Blyth*, *Lark*, *James Pilling* and a number of good fancy *Pansies*.

Pansies and *Violas* in pans make a pleasing feature of Messrs. Dobbie and Co.'s (Edinburgh) group. These are growing plants, and give a proper idea of the growth of each sort. Of the *Violas*, *Redbraes Bronze*, *Mrs. Chichester*, *Edina*, *Mrs. Norris*, *Elye*, *Fred Williams* and *Crimson Bedder* are shown. *Dobbie's Gem* is a fine bedding fancy *Pansy*.

an old and, we believe, rare poem on a British garden come to us:

"Managed well by skilful florist's care,
Preserve their compass truly circular."

This may have been written in the days of the short, fat, bursting calyces; but it is appropriate to describe the beautiful, long-calyxed Jean Douglas (Geranium scarlet), Annie Laurie (blush pink), Bookham Yellow (the upstanding yellow, The Ameer (glowing crimson) and Mrs. Andrew Brotherston (white, very thickly splashed mole-armine). Mr. Douglas also has some old-fashioned Pinks. One, Aviator, will appeal to many, and is a contrast to those which are shown by Mr. C. H. Herbert, whose little group is to be seen not far away.

Messrs. Stuart Low and Co. have a particularly interesting lot here, as well as a second group in the two-acre tent—Satin Robe (an improved Winsor), Gorgeous (the wonderful cherry carmine which is so good under electric light) and a series of perpetual Malmaison seedlings, one of which might almost be a replica of the famous Princess of Wales.

No one must miss the highly interesting series of new American novelties which Mr. W. Wells has. The following three were first distributed in England this spring: Champion (scarlet), Philadelphia (pink) and Peerless (cerise). Once we were dependent on Uncle Sam for all our good things, but it is not so now, as an enquiry at the different exhibits will soon convince the reader. Mr. E. J. Wootten, for example, has Lucifer (scarlet), Mousmé (heliotrope and scarlet) and Lord Chancellor (a free, small, deep crimson), all made on the premises at Eastleigh, England. And he is but one of many where the same thing may be found.

Now for the Large Tent where there is no conventional staging, but where each group is after the exhibitor's own fancy.

Messrs. Allwood Brothers have a palmy exhibit with the famous rose Mary Allwood and the scented white Wivelsfield White conspicuous, not to mention some Malmaison-looking seedlings, e.g., Exquisite (pale salmon), all, we believe, perpetual.

Pot plants are a change, and visitors will find such a one in the group of Messrs. William Cutbush and Son in one of the centre spaces. Lady Ingestre, Mercia and Lady Coventry should be noted here.

A second pot group, which we are taking out of alphabetical order, is that of Messrs. Young and Co., Cheltenham. From the advertisement in the wonderful Royal Horticultural Society's Book of the Show one may expect to see Mr. Taudevin beside his flowers. He will be there all right, or, like the Allwoods, Engelmann, Dutton, Cook, Burnett and others, he is always there or thereabouts. He will point out the beauties of the summer-flowering Cecilia or the deep rose pink May-Day-looking Lady Nunburnholme, or the dark clove Duchess of Devonshire—a fine trio. When in our wanderings among the maze of bright beds we came upon Mr. A. F. Dutton's display, we instantly thought of the Bohemian Girl who "dwelt in marble halls." How nice to have been her on a hot day! Mr. Dutton looked so cool, and his exhibit looked so cool—what mattered it now that he had searched half London before he found what he wanted. "Go and see," to slightly alter a familiar saying, and when you do, be sure to bury your nose in the white Niagara and make particular enquiries for Chelsea, an

exquisite rose and white fancy or old-fashioned Picotee, to our mind about the best of its class. It is an Ar variety.

In one of the Hospital end corners will be found the superb display of that very go-ahead raiser and grower, Mr. Engelmann. Plenty of beauties, old and new, may be seen in his collection. Queen Alexandra, the delightful pink sport of Scarlet Glow, the bright scarlet sport of Carola; Circe, a study in mauve and cerise; and Bella, a small pale apricot-coloured "Painted Lady." Three hundred and fifty years ago at least the Carnation "had been made pleasant and sweet by the wits of man" (Turner, c. 1550). Man is still making it pleasant, and we hope is going to make it sweeter. We want more scent to-day.

TULIPS.

Tulips are very much to the front. There are sixteen groups mentioned in the list of flower exhibitors, to say nothing of those others, such as Carter's, where the flower is only a sort of incident in a larger scheme or group. If the Carnation is "the Summer's Glory," "the Tulip is the Pride of Spring." Can it be otherwise when we see the splendid magnificence of this marvellous flower? Last year Messrs. John Jefferies and Son brought one of their Cotswold hills and covered it with bloom. The seed sown has borne fruit, and visitors will find to-day a Taplow hill (Messrs. Barr and Sons), a Wisbech hill (Messrs. R. H. Bath) and a Kidderminster hill (Messrs. Cartwright and Goodwin). Each is covered with fine bloom. Zulu, Remembrance and the splendid Professor Rauwenhoff on the latter; Louis XIV., Morales and Ellen Willmott on the first; and Petrus Hondius and King George V. on the Wisbech one, must all be sought out and found. Each is good of its kind. We suppose because "the powers that be" wanted another novelty, the hill pioneers (Messrs. Jefferies) are relegated to a side position. They have a pleasing array, in which Ouida, James Wild (a good bizarre) and the new Van der Heede may be noted.

Messrs. Dobbies', as usual, are magnificent, large and clean. Visitors will appreciate their bold masses of Velvet King, Sunset and Margaret (Gretchen).

The most novel display of Tulips in the whole show is that of the bedding arrangement of a firm which hails from Manchester—Messrs. Dickson and Robinson.

Mr. Compson has given us a bit of the real thing. He has made up real-looking beds, and to those who want ideas we say, unhesitatingly, pay this exhibit a visit. The maroon King Harold, with an undergrowth of Funkia Sieboldii fol. var., the scarlet Gesneriana major among the Columbines and the quiet, refined bed of Ph. de Communes, Turenne and La Tristesse, filled in with pale mauve Phlox divaricata, are samples of an exceedingly instructive and well-thought-out idea.

All the above-mentioned are to be found in the Large Tent.

In the Table Tent we find more conventional groups.

Mr. Watts of St. Asaph has some fine, well-grown flowers, Baronne de la Tonnaye, Ouida and Orange Globe being very good.

Messrs. R. Wallace and Co. stage for the most part Cottage varieties. They make a welcome change from so much "Darwin," for a considerable proportion of the public, we feel, appreciate the more pointed and less stiff types. Pride of

Inglescombe, Innovation and The Fawn are examples.

Messrs. Waterer and Crisp, Messrs. Sutton and Sons, Messrs. Hogg and Robertson, Messrs. R. and G. Cuthbert and Sons and Messrs. Dicksons of Belfast all have fine, large displays, and we wish we could individualise the varieties on each stand in detail. May Blossom, La Singulière, Plutarchus, Zomerschoon, Ascanio, Giant, Isabella, Panorama and White Queen (as seen at Messrs. Cuthbert's) are all worthy of mention.

We would like to call special attention to Mr. C. Bourne's group, and also to that of Mr. Dawkins's. This is the latter gentleman's first appearance "on his own" at Chelsea, and we take the opportunity of wishing him *bon voyage*. May the shade of Davey rest upon him, and may he find a public as willing to buy as the older florist did a century ago when the *cheapest* late Tulip was priced at 2s. each (1823). Rises take place now. Mr. Bourne has The Bishop, the bluest purple Tulip. Its jump in price is one of the mild sensations of the present.

We close this short account of what is on view in the way of Tulips with the assurance that time spent among them will be so much *well* spent, for, as Mr. Jacob says, "A garden to-day is not a garden unless it has some Tulips in it."

The Royal National Tulip Society is holding its annual show of florist and other varieties in the Council Tent. The love for these aristocrats of the floral world is an educated one. The taste for these sun-loving flowers is an exceedingly refined one. Hence they are not everybody's choice, but to their devotees they spell enjoyment and charm. Mr. C. W. Needham and Mr. A. D. Hall are giants here.

TREES AND SHRUBS.

This is a grand season for Rhododendrons and Azaleas, and these shrubs are among the most floriferous in the exhibition, while the highly coloured foliage of the Acers almost vies with the flowers in the brightness of the effect. For the purpose of convenience we will deal first of all with the trees and shrubs shown in the Large Tent.

Messrs. James Veitch and Sons, Chelsea, have a beautiful collection of flowering shrubs, in which Rhododendron Pink Pearl may be seen in the height of perfection. The brilliant red Rhododendron Doncaster is also good, while Philadelphus Virginal, Rosa Hugonis, the pink-flowered Cytisus Dallimorei, Viburnums, Clematises and Hydrangeas are shown in wonderful profusion.

Some choice Rhododendrons are shown by Mr. G. Reuthe, Keston, such as Dalhousei, Loder's White, Aucklandii hybridum, cinnabarinum Roylei, fragrantissima, also the Japanese variety Kämpferi, gemmiferum and yunnanense—a very interesting and uncommon collection.

Messrs. Fletcher Brothers, Ottershaw, Chertsey, are showing four triangular groups of Rhododendrons, and among the pick of varieties are Pink Pearl, Meteor, Lady Frances Crossley and Helen Schiffner.

Hardy Rhododendrons are magnificently staged by Messrs. John Waterer, Sons and Crisp, Limited, Bagshot, Surrey. The variety Alice, which by many is considered better than Pink Pearl, is shown in finer form than we ever remember having seen it. Corona, Cynthia and Francis B. Hayes are all admirably shown.

Mr. R. C. Notcutt, Woodbridge, is showing standard Brooms in great variety, the collection including *Cytisus Beanii*, *C. Dallimorei* and *Daisy Hill*: the latter makes a splendid standard. Rhododendrons and Azaleas, both in the tent and outside, are shown in many hues of colour by the same firm.

Lilacs are being shown by Mr. Charles Turner, Slough. His best varieties include *Mme. Kreuter*, *Mme. Leon Simon*, *Souvenir de L. Späth*, *Charles X.* and the lovely double white *Jeanne d'Arc*.

Messrs. W. and J. Brown, Peterborough, are showing Lilacs in pots, including the double white *Mme. Lemoine*. The group is edged with *Heliotropes Lord Roberts* and *The Speaker*.

Messrs. Barr and Sons, Covent Garden, have an interesting group of Japanese pygmy trees—fine specimens of *Cupressus obtusa*, ranging in age from twenty to one hundred and sixty years; Japanese Larches in shallow pots, and various specimens trained in quaint forms of sacred fans, storks and chickens. Miniature landscape scenes, containing rivulets, chasms and bridges, are examples of Japanese art.

Messrs. William Cutbush and Sons make a special feature of new *Hydrangeas Lillie Moullière*, *La Perle* and *Generale Vicomtesse de Vibraye*. The plants shown carried blue flowers, the plants having been treated with *Azure*. Japanese *Acers*, *Azaleas* and *Rhododendrons* are shown in profusion, while outside may be seen an extensive collection of Cutbush's Cut-bushes—examples of toparian art.

Messrs. W. Paul and Son are showing *Rhododendrons*, *Ceanothuses* and *Clematises*, the latter in both single and double varieties. A number of Brooms or *Cytisuses* and the fragrant *Crab*, *Pyrus angustifolia flore pleno*, together with Lilacs, make up a very pleasing group. *Wistarias*, *Ivies*, *Honeysuckles* and ornamental Vines are all to be seen in this comprehensive collection.

Mr. John Klinkert, Richmond, S.W., shows clipped Boxes in many weird forms. As examples of toparian art the trees were remarkably well grown and trained.

Clipped Yews, Boxes and standard Bay trees were shown in great numbers by Messrs. Piper, Barnes, Surrey.

A circular group of *Clematises* is shown by Messrs. George Jackman and Son, Woking Nurseries, Surrey. Among the varieties will be seen *Duchess of Edinburgh* (double white), *Empress of India*, *Lasurstern* and *Nelly Moser*. *Azaleas*, *Lilacs* and Brooms are also shown by this firm.

Mr. L. R. Russell, Richmond, is also showing *Clematises*, and outside he is showing *Azaleas* and *Ivies* mingled with *Ceanothuses* and Japanese *Maples* in wonderful variety.

Messrs. R. and G. Cuthbert, Southgate, have succeeded in creating a perfect blaze of scarlet, orange and yellow with their *Ghent Azaleas*. Many of the varieties are the result of crossing *A. mollis* and *A. sinensis*. The bright golden yellow *Anthony Koster* is a feature of this group.

A collection of old *Wistaria* plants grown in tubs or bowls. These plants arranged with Japanese pygmy trees in *Cupressus* and *Acers* make a very inviting *Wistaria* garden.

Messrs. Paul and Son, Cheshunt, Herts, are showing pot *Rhododendrons* uniform in size and beautifully flowered. *Pink Pearl* is, of course, a feature, and other good varieties are *White Pearl*, *Jupiter* and *Helen Paul*.

Messrs. Cheal and Sons, Limited, Crawley, Sussex, have a well-designed formal garden with

pillars and arches clothed with rambler *Roses*. The beds on either side are planted with *Viburnums*, *Azaleas*, *Rhododendrons*, *Lilacs* and *Ceanothuses*, with pleasing effect. At one end is a formal recess banked up with rockwork and retaining walls, suitably planted.

The Donard Nursery Company, Newcastle, County Down, are showing many choice and rare shrubs, including *Leptospermum scoparium* and the varieties *Nichollii*, *Chapmanii* and *Boscawenii*, *Tricuspidaria lanceolata* and *T. dependens*, *Pittosporum* in variety, *Enkianthus cernuus* and *Deutzia gracilis roseus*. Altogether a most interesting collection of rare shrubs.

Japanese *Maples* in endless variety are shown by Messrs. W. Fromow and Sons, Chiswick, W. The deep bronze-tinted foliage of *palmatum purpureum*, *p. atropurpureum* and *p. Crispii* associate with telling effect among the lighter tones of *Acer japonicum aureum*, *A. corallinum* and *A. reticulatum*.

FRUIT AND VEGETABLES.

From the Hon. John Ward, Hungerford, may be seen a first-rate collection of scarlet, green and white fleshed Melons. Superlative (scarlet) and *Emerald Gem* (green) are perhaps the pick of a very fine lot.

Messrs. Sutton and Sons, Reading, quite excel themselves in quality and arrangement of their superb collection of vegetables. Among the produce will be observed: *Cucumbers Unique*, *Lord Roberts*, *Satisfaction* and *Pride of the Market*; *Peas Hundred Fold* and *Duke of Albany*; *Tomatoes Invicta*, *Early Market* and *Magnum Bonum*; *Potatoes Ringleader* and *May Queen*; and many other kinds.

The Hon. Vicary Gibbs, Aldenham House, Elstree, sends a collection of vegetables of the high standard of excellence that we have learnt to associate with the name of Mr. Edwin Beckett, the capable head-gardener. The *Peas* are exceptionally fine, particularly *Duke of Albany* and *Quite Content*. *Asparagus*, *Cucumbers*, *Cauliflowers* and *Tomatoes* are all shown in the height of perfection.

A dainty collection of early vegetables is staged by Messrs. H. Cannell and Sons, Eynsford, Kent. *Tomatoes*, *Peas*, *Cucumbers*, *Cabbages* and *Potatoes* are all well shown.

Messrs. Carter and Co., Raynes Park, are to be complimented on the arrangement and the quality of their group of vegetables. *Peas*, *Cucumbers*, *Radishes*, *Beetroot*, *Celery*, *Turnips* and *Tomatoes* are to be seen in great variety, and the arrangement is all that can be desired.

The collection of well-kept *Apples* staged by Messrs. G. Bunyard and Co., Maidstone, is deserving of great praise. The collection includes *Lane's Prince Albert*, *Lord Derby*, *Bowhill Pippin*, *Newton Wonder*, *Clark's Seedling*, *Newtown Pippin*, *Annie Elizabeth*, *Beauty of Kent*, *Sandringham* and many others, also *Pear Uvedale's St. Germain*.

Early vegetables are nicely shown by the Thatcham Fruit and Flower Farm, Newbury. *Carrots Demi-longue de Hallé* and *Early Horn*, and *Peas Pioneer* and *World's Record* are foremost among the features of this collection.

Messrs. Laxton Brothers, Bedford, are showing a most tempting exhibit of *Strawberries*, *Gooseberries* and *Currants*. Fruiting plants of all kinds are shown, the exhibit containing numerous baskets of *Strawberries*, such as *King George*,

The *Earl and International*, in the foreground. The *Strawberries* are of superb quality and beautifully finished.

The King's Acre Nurseries, Limited, Liverpool, are showing fruit trees in pots, all nicely cropped with fruit of the highest excellence. *Nectarine Cardinal* is especially fine, and the same may be said of *Peach Duke of York*, *Plum Rivers Early*, *Apple Lady Sudeley* and *Figs* in variety.

SUNDRIES.

This important section of horticulture has now become a recognised feature of the exhibition, and on no previous occasion has so large and varied a display of garden requisites been seen to better advantage than at the present show. The whole of a large tent, in addition to many stands in the open, combine to provide the "hundred and one" necessary adjuncts to a perfect garden.

INSIDE THE LARGE TENT.

Messrs. Abbott Brothers, Southall, stage their well-known *Osterley table tray*, *cake stand* and *honey spoon* as special features.

Messrs. Barr and Sons, King Street, Covent Garden, W.C., present a most interesting display, showing garden tools, including their most useful bulb planter, cutlery and other garden requisites.

Nesting-boxes and hanging pots for alpine plants to use on fences and special manures are among the features shown by Messrs. Barrie and Brown, King William Street, E.C.

Messrs. Joseph Bentley, Limited, Barrow-on-Humber, are showing their famous horticultural specialities, which distinctly proves the great advance in horticultural chemistry during recent years.

Paper pots, seed pockets, filling machines and general sundries of a wide and varied character are staged by Messrs. Blake and Mackenzie, Limited, Islington, Liverpool.

A novel stand is arranged by the Boundary Chemical Company, 27, Cranmer Street, Liverpool, showing the use of their "Simplicitas" patent cord netting for training Sweet Peas growing in boxes. Lawn sand, weed killer and spraying syringes are also being shown on the same stand.

A thoroughly interesting and instructive display is that staged by Messrs. James Carter and Co., Raynes Park, S.W., showing the method by which all seeds sold by this firm are scientifically tested.

Messrs. Joseph Cheal and Sons, Crawley, Sussex, have a wide display of landscape plans and photographs relating to their work in connection with the garden.

Messrs. William Cooper and Nephews, Berkhamsted, have a most interesting stand of insecticides, weed-killers, spraying pumps, &c., on view.

Garden books and papers are prominently shown by *Country Life*, Limited, in the Lime Avenue in a prominent and picturesque manner.

The Economic Fencing Company, Billiter House, Billiter Street, E.C., have good examples of their well-known fencing erected for inspection and to demonstrate the simple method of construction.

The Four Oaks Spraying Machine Company, Sutton Coldfield, Birmingham, stage in their usual form a thoroughly representative display of garden syringes and sprayers of all sizes and suitable for all gardens, from the smallest to the largest. Modern scientific improvements, together with the best workmanship and material, are synonymous with the goods on view.

(Continued on page xvi.)

TWO MOSSY SAXIFRAGES.

SAXIFRAGA DECIPIENS AND S. PEDEMONTANA.

FOR the shady parts of the rock garden there are no more useful plants than the Mossy Saxifrages. During the whole of the year they provide beautiful green carpets of foliage that are very attractive at all times. In the late spring and early summer the white or rosy pink flowers are produced in great profusion, covering the whole cushion with sheets of bloom.

The cultivation of the Mossy Saxifrages is not difficult. They all like a light, rich, but well-drained soil that never gets dry. The best aspect for them is one facing north-west or north-east; but they will flourish equally well in full sunshine, providing they are supplied with plenty of moisture. They are among the easiest of plants to propagate, the best method being division of the roots soon after the plants have flowered. The divided pieces should be planted in a made-up bed on a shady border, and kept supplied with water till they are well rooted. Of the two kinds here illustrated, *S. decipiens* is one of three species that are most difficult to distinguish one from the other. Between both *S. caespitosa*, *S. sponhemica* and *S. decipiens* are intermediate forms that connect the three together in an unbroken chain. They all hybridise so freely in gardens that one cannot rely on seeds as a means of propagation if a certain form is desired. *S. decipiens* is a Northern European plant of rather more robust habit than the other two, with taller stems and larger white flowers. There are many named varieties of it grown in gardens, including *groenlandica*, *quinquefida*, *Steinmannii* and *Sternbergii*, not to mention all the red-flowered kinds like *S. decipiens grandiflora* and *S. d. sanguinea*. *S. pedemontana*, also known as *cervicornis*, is more distinct. It produces a dense carpet of rosettes, composed of mostly three-lobed leaves that are rather thick and strongly nerved. The flowers are borne in April and May on stems about six inches high. It receives its name from the fact that it was first introduced from the Alps of the Piedmont, but it is also found in the Pyrenees as well as on the Swiss Alps.



SAXIFRAGA DECIPIENS AND S. PEDEMONTANA FLOWERING TOGETHER IN THE ROCK GARDEN.

THE CROWN CAMPION.

In the Crown Champion, *Lychnis* or *Agrostemma coronaria*, we have an old-fashioned flower which has yet an abiding-place in many good gardens, and which has survived the rout of the hardy plants which took place when the bedding system was in full sway in most gardens. It is a general favourite still, although it has now hosts of worthy rivals in the field for the favour of the cultivator of hardy plants. It is fairly well known to the many, with its greyish silvery-looking leaves and stems and its

heads of pink, white, or crimson flowers on stems about two feet high, or sometimes rather less. It is not an absolutely perennial plant, as the writer has found not only in his own, but in other gardens; but there is little fear of losing it, as it seeds freely, and from self-sown seeds a numerous progeny will spring to maintain the family line. To make a beginning, a few seeds should be sown under glass in spring, or in April, May, or June in a shallow drill in the open garden, the seedlings being pricked off when large enough to handle. It is needless to give lengthy directions as to raising *L. coronaria* from seeds, however, as it is as easily done as any hardy annual or perennial can be. It may also be increased by side shoots taken

off in summer. Some of these will be rooted, but if they have not emitted roots they can be readily struck under a handlight or a bell-glass.

A dry soil answers best for this Crown Champion. I have seen capital plants growing in mere gravel, although they were not so tall as those in the border. The type plant seems to have red flowers, although some think that the one called bicolor, which has white flowers with a red centre, is in reality the typical one. Then there are a large-flowered variety called *grandiflora*, a pretty pure white one called *alba*, a brilliant crimson one named *atrosanguinea* (the best of all), besides the doubles, which the writer has not seen now for many years. *Dumfries*.

S. ARNOTT.

HARDY CYPRIPEDIUMS.

(LADY'S SLIPPER ORCHIDS.)

THE hardy *Cypripediums* are all attractive plants, and worthy of more extensive cultivation. Most of them can be grown with a little care and attention. Fond of somewhat shady and sheltered positions, they are, with few exceptions, found growing in open woods, with the spreading roots running among the decayed leaves that have been accumulating for many years. They may be grown in the rock garden in low-lying spots that are thoroughly well drained and also have the necessary shade.

They are not deep-rooting plants, so it will only be necessary to take out the original soil, if unsuitable, to the depth of about a foot. If the soil is heavy, plenty of drainage in the way of broken bricks will be needed; but if the soil is sandy, little will be required. For the majority of the different species a suitable soil may consist of equal parts of rough peat and well-decayed leaf-soil, some loam and sand, while old sphagnum moss incorporated with the mixture will be found helpful in retaining moisture. Charcoal is often used to keep the soil sweet. Most kinds will grow in this compost, some exceptions being our native *C. Calceolus* and the Siberian *C. macranthum*, which prefer a loamy soil with the addition of lime. For these, lime must be added in the form of broken limestone or mortar rubble.

The best time to plant *Cypripediums* is in the autumn, as soon as the plants can be procured. These should never be allowed to get dry, as the fleshy roots soon shrivel up if the plants are kept out of the ground too long. With the introduction during the last few years of some new species from China, there are now seventeen hardy *Cypripediums* in cultivation.

***Cypripedium acaule* (*C. humile*)** is a North American species with a pair of broad, hairy leaves, from between which it pushes up a flower-stem over six inches long, surmounted by a green bract and single flower. The sepals are whitish,

while the large pouch is of a bright rose colour veined with crimson. It is distinct from all others in the pouch being split right down the face, giving it a two-lobed appearance.

C. arietinum is a pretty little plant, less easy to grow than most other kinds. The sepals are greenish white, while the lip is white and suffused with rose on the front. It is found in somewhat damp woods in North America.

C. Calceolus, a native of this country, is excellent for naturalising in woods, especially where the soil is of a heavy and calcareous nature. When established, it makes large tufts of many stems, each producing two or three flowers, the sepal of which are deep brown, while the pouch is yellow.

This plant is found in many parts of Europe and Siberia.

C. californicum is an interesting species with tawny yellow sepals and a blush white pouch obscurely spotted with brown.

C. candidum is also very charming, with greenish brown sepals and a yellow lip.

C. fasciculatum bears several flowers on each stem, which often reaches a height of a foot. The sepals are greenish, as is also the lip, which has a purple brown margin. The above three species are less easy to keep than most of the others, and are all North American plants.

C. debile is an interesting little plant from Japan, with a pair of leaves like our native Tway-blade (*Listera ovata*), and a slender, drooping stem bearing a small single flower. The sepals are greenish, while the white pouch is spotted with brown.

C. guttatum is a rare Siberian plant, and is one of the prettiest as well as one of the most difficult to establish. It prefers soil of a light, open description, with plenty of moisture when growing, but rather dry when at rest. The flowers are of fair size, with white sepals and pouch, the latter being spotted and blotched with crimson-purple.

C. japonicum is remarkable for its pair of broad and distinctly ribbed leaves, from which

one or two flowers are produced singly on short stalks. They are large and handsome, striated and blotched with green, white, and rose purple. This plant grows freely in shade, but frequently strong crowns fail to flower.

C. luteum comes from North-Western Hupeh in China, where it was collected by Mr. E. H. Wilson, who also met with it in greater quantities on the borders of China and Tibet. It is an erect-growing plant, with solitary flowers, the sepals and petals being clear yellow, while the yellow pouch usually has a few spots of orange brown on its face. The stems are stout and leafy, and covered with a short, brownish pubescence.

C. macranthum.—This Siberian species is one of the most handsome members of the family, growing about a foot high and bearing large, almost uniform, rose purple flowers. It is partial



A DAINY LADY'S SLIPPER ORCHID: *C. MONTANUM*. THE TWISTED SEPALS ARE BROWN AND THE POUCH WHITE.



AN INTERESTING HYBRID: *CYPRIPEDIUM VENTRICOSUM* (*C. MACRANTHUM* × *C. CALCEOLUS*).

to a more loamy soil than most of the others, approaching in this respect more nearly *C. Calceolus*, with which it is often found growing in its native habitats. These two intercross and produce an intermediate plant known as *C. ventricosum*, which differs from *macranthum* in its longer, narrower sepals, narrower pouch and paler colour. *C. Thunbergii* is the Japanese form of this plant, with paler-coloured flowers.

C. montanum is a beautiful and distinct little species from North-Western America, with three or four flowers on each stem. The sepals are brownish

purple, while the pouch is white and striped with red inside. (Syn., *C. occidentale*.)

C. pubescens (*C. hirsutum*).—A handsome, free-growing species from North America. In a cool, shady spot it will thrive and produce stems up to 2 feet high, bearing large yellow flowers. The twisted sepals are pale yellow and spotted with brown.

C. parviflorum is a closely allied species of *C. pubescens*, with smaller yellow flowers, spotted and suffused with brown. It is also a native of North America.

C. Reginæ (*C. spectabile*).—One of the finest hardy Orchids and the easiest to grow. It will thrive in a shady border and form large tufts, with many of the stems over two feet high, bearing two or three flowers on each. In colour they are white, with the greater portion of the lip suffused with rich rose. In sheltered portions of the rock garden groups of it are very attractive, the necessary conditions being thorough drainage, rich soil and plenty of moisture. It comes from North America.

C. tibeticum.—A handsome species from Western China, and another introduction of Messrs. Veitch and Sons through their collector, Mr. E. H. Wilson. In habit it resembles *C. macranthum*, but its flowers are larger, with the sepals tessellated dark purple and a chocolate-coloured pouch. So far it has not proved very amenable to cultivation.

W. I.

GARDENING FOR BEGINNERS.

MUSHROOM CULTURE ON OLD HOT-BEDS.

IN the majority of small gardens the Mushroom is rarely cultivated, there being a prevalent idea that it cannot be grown without special beds and structures. Certainly, if one requires this delicious vegetable all the year round, a Mushroom-house becomes a necessity. However, there must be numerous gardens where there are one or two old hot-beds lying idle all through the summer, and it is in these that sufficient may be grown to supply the household for several weeks. Those who utilise frames for the raising of half-hardy annuals, &c., will have them empty about the end of June, the manure which originally composed the hot-bed being left in the frames until it can be dug in during the autumn months. These old beds of manure will give quite a good crop of Mushrooms without any trouble.

As a rule, a period of six to eight weeks elapses between spawning and the appearance of Mushrooms, so that June and July are very suitable months in which to spawn the beds. The manure will have lost most of its natural heat at this time of the year, but will have retained sufficient solar warmth to start the white films or "mycelium." It is essential that the spawn should be good, otherwise the Mushrooms will be few and poor in quality. For a 6-feet by 4-feet frame one brick of Mushroom spawn will suffice. This should be broken into eight or ten pieces, which should be forced into the manure at regular intervals over the bed. Do this by hand and not with a dibbler, as so many do, for this instrument leaves smooth, hollow spaces which prevent the spawn from spreading. Do not break the brick into more than ten pieces, for small pieces result in small Mushrooms.

As soon as spawning is completed, cover the bed with straw or litter of some kind and put on the lights. In about a week the spawn should have commenced to impregnate the manure. It is easy to see if all is well, for should the spawn be bad or not alive, the pieces will be considerably darker than when inserted. If, however, they appear greyish or mouldy, then the time has come for covering the bed with soil. The best soil for this purpose is undoubtedly that from an old pasture which has been stacked for about a year. It is Nature's compost, and the Mushrooms will revel in it. When applying, it should be moderately moist, the layer being from 2 inches to 3 inches thick. Beat it down solid with the back of a spade; it cannot be made too hard, as the Mushrooms will come through, no matter how hard the soil may be. The writer has seen the uncultivated Mushroom make its appearance through a hard-rolled carriage drive. Having beaten down the earth, again replace the litter, or, if this is not obtainable, the lights may be placed on the frame and the glass covered with sacking. Every endeavour should be made to keep an even temperature of 60°, which may be accomplished by varying the thickness of the covering material. The bed should be kept uniformly moist, for if allowed to become dry, the bed will almost certainly fail to produce. The degree of moisture may be ascertained by keeping two sticks thrust in the top and bottom of the bed, which should be withdrawn from time to time and examined. If found to be too dry, the bed should be moistened with a

syringe, using water of the same temperature as the bed. If litter is used, this must be removed before spraying, and returned as soon as the operation is over, putting on the lights to keep the temperature normal.

If no Mushrooms appear in eight weeks, do not assume that the bed is a failure, for it may happen that they will appear in another week or two. When they make their appearance, do not remove the covering material more than can be helped, otherwise the Mushrooms are apt to become brown on the top. When gathering, pull out the stalk, which would otherwise decay and stop the production at that part of the bed.

South Heath, Great Missenden. THROXENBY.

HOW TO GROW CANTERBURY BELLS.

For making a brilliant display of colour in early summer and midsummer few flowers can rival these

see that the young plants do not suffer from the want of water, and keep them free from weeds. If it can possibly be managed, transplant to their flowering quarters early in the autumn, as by so doing they become established before the winter sets in, and start straight away without a check when the milder weather comes round. Most amateurs have a shady border which it is always a difficulty to fill, and if any readers are in this predicament I would advise them to give these plants a trial.

Troon, Ayrshire.

G. B. W.

SOME SALIENT POINTS IN BEDDING OUT PLANTS.

THE work of clearing away spring-flowering subjects to make room for the summer-flowering ones is being attended to now, and much thought will be given to the arrangement of the new occupants of the beds. It is well to remember that the soil in the beds is poorer now than it was last autumn, and that



MUSHROOMS GROWING IN AN OLD HOT-BED THAT HAD PREVIOUSLY BEEN USED FOR BEDDING PLANTS.

old favourites, which have for so many years adorned our gardens. Plants raised from seeds last year will now be throwing up their flower-spikes, and if they are in a position at all exposed to strong winds, a neat stake should be attached to each, so that, should a storm come, one may rest assured that no damage can be done. A thorough soaking of liquid manure or a top-dressing of some approved fertiliser given at short intervals until the colour shows in the buds will be of immense benefit to the plants at this season of their growth.

Sowing Seed.—But while the grower of these plants is eagerly awaiting the result of his work during the last twelve months, he must not rest on his laurels if he wants another display next year, as the present is the most opportune time to sow seed. By sowing early, strong tufts are produced by the autumn, and only well-grown specimens make a good display the following season. Sow the seed thinly in drills far enough apart to allow the hoe to pass between, and when germination has taken place, thin out to about six inches apart. If the summer is very dry,

some fresh soil would be an advantage. In order that the soil may be kept at a certain level, some of it should be removed before the new soil is put in; then the latter and some well-rotted manure should be thoroughly mixed with the old loam. In the case of clayey loams, add some leaf-soil and a small quantity of peat for Begonias, and where the soil is fairly rich, be more sparing of the manure if Zonal Pelargoniums, Nasturtiums or Petunias are to occupy the beds. With regard to the form of the bed where sandy soils obtain, I have seen many formed with high centres, resulting in a pitch of nearly 30°. Very little water ever penetrated the dusty surface, and the plants put out never fully occupied the space they were intended to fill. In instances of this kind a flat surface is much more satisfactory.

In hot places, Zonal Pelargoniums, Petunias and Nasturtiums will succeed better than in damp, shady ones; while in the latter, tuberous Begonias, Fuchsias, Pansies, Violas and Calceolarias will thrive. It is advisable to pick off fully developed flowers at planting-time. SHAMROCK.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Early Muscat Vines.—If these were started early, the Grapes will have passed the stoning stage, and should be induced to finish ripening to as high a degree as possible. When colouring commences a constant movement of moderately dry air ought to be maintained, and the night temperature never allowed to fall below 70°, rising to 80° or 85° by day with sun-heat.

Thinning Late Grapes.—In all cases this work should be taken in hand as soon as the berries are sufficiently advanced, for if once delayed the work becomes increasingly difficult day by day, and many of the berries are injured in consequence. Avoid touching the bunches with the hand, and keep the scissors perfectly clean. The largest and best-placed berries should be left in such a manner that the full circumference of the bunches may be retained. Promote a moist atmosphere and give air with great caution.

Late-Planted Vines.—All lateral shoots may be stopped at the first joint, and keep the leading shoot from coming in contact with the glass. Shut up the house early in the afternoon in order to make the most of the sun-heat, and never allow the Vines to suffer from want of water at the roots.

Plants Under Glass.

Primula sinensis.—If seeds were sown in April, the plants will now require potting into small, clean pots. The soil may consist of rich loam and leaf-soil in equal parts, with sufficient sharp sand to keep it sweet and porous. Place them near the glass in a close pit, and syringe with clear soft water twice daily. Further sowings may be made now in finely sifted soil.

Cinerarias.—Young seedlings may be potted as soon as a second rough leaf has been made. Place them in a close, cool pit and shade from strong sun. When well rooted, ventilation should be freely given, and they must never be permitted to suffer from want of water at the roots. For successional plants sow again and grow in a clean, well-ventilated pit.

Cannas.—These plants appear to advantage in the conservatory during the summer, where they associate well with other subjects. They require a liberal supply of moisture at the roots, and will benefit by an occasional dusting of artificial manure. Plants intended for late flowering should be potted up into larger-sized pots. Rich loam and leaf-soil will suit them well.

Hard-Wooded Greenhouse Plants.—The latest batch of Azaleas will be in flower now, and will require careful attention to watering. As soon as the flowering period is over, the plants should be removed to an intermediate house and started into growth. Remove all seed-pods, and when growth commences any potting which is necessary should be done before the young growths are too far advanced.

The Flower Garden.

Bulbs.—There should be no delay in planting any bulbs which have been forced. If planted in the pleasure grounds while the foliage is green, they will retain their foliage much longer, and better results may be expected than if allowed to wither in the pots before being put out.

Salvia Pride of Zurich.—These plants should be gradually hardened and prepared for planting in the open. If pot-bound, they must be carefully watered, so that they may not become stunted before the time arrives when they may be planted out with safety. Weak liquid manure may be given at alternate waterings until they are put out.

Preparation for Summer Bedding.—As soon as the early flowering bulbs are over, the ground should be prepared for other subjects. Let the soil be thoroughly broken up, and, if necessary, a quantity of old Mushroom-bed manure or that from a spent hot-bed should be mixed with it. Beds in which Begonias are to be planted should receive special preparation in the way of good leaf-soil or some light, rich material, and may also receive a sprinkling of fine bone-meal. When all is ready,

the hardier plants, such as Geraniums, should be planted first, leaving Heliotropes, Begonias, Cannas, Iresines and other tender subjects till the last.

Dahlias.—Spring-struck plants may still be kept under slight protection, but old plants which have been forwarded in cold frames may have the lights removed, only to be replaced in case of frost. Planting may be delayed until the first week in June, especially in low-lying districts where late frosts are frequent.

The Kitchen Garden.

Broad Beans.—Another sowing of these may be made now, and, if necessary, a fortnight later. Broad Windsor is the best variety for this purpose, and will do much better if sown in trenches into which a quantity of decayed manure has been dug. Early sown Beans may have their tops removed immediately after sufficient flowers are open, and should black aphids appear, the plants ought to be syringed with a mixture of soft soap and water.

French Beans.—Plants which are pushing through the ground will require protection from frost or cold winds, but this crop will repay the cultivator for any extra trouble. Fortnightly sowings may be made from now onwards, in order to keep up a supply of tender young pods. The Belfast is one of the best for this purpose, and if picked young may be cooked and served uncut.

Potatoes.—The soil between the rows of early Potatoes should be deeply stirred previous to earthing up the plants. This will destroy numerous small weeds, as well as prepare the soil for the young tubers. In earthing up Potatoes the soil should not be drawn up to a sharp ridge, but left in such a way as to permit the rain-water to reach the roots.

Spinach.—Make frequent sowings from now onwards, choosing a cool north border for the purpose. Make a small sowing of New Zealand Spinach in a warm position. This may prove a valuable substitute for ordinary Spinach if hot weather sets in.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Broad Beans.—Where these were sown towards the end of January they will now be in a forward state, and if it is desired to have an early supply, the points should be pinched out as soon as there is a good show of blossom. Sometimes this is necessary where the crop has been attacked by fly, as it seems to be the only means of getting rid of it. Should the weather be excessively dry, the plants ought to have a good soaking of water, otherwise, if allowed to become dry at the roots, the blooms are sure to fall off.

Turnips.—Should the fly make its appearance on the young plants, no time must be lost in giving them a dusting of soot or lime. I have also found dusting with fine ashes that have been kept dry most effectual. For obvious reasons this dusting should be done in the early morning, and done thoroughly. Sometimes, however, all of these fail to save the crop, and there will be nothing for it but to make another sowing in somewhat richer soil.

Runner Beans.—As these Beans are less hardy than the dwarf varieties, it will not be wise to sow much before this date; indeed, if left until the beginning of June there will still be time to secure a crop in an average season. They may be sown in long single or double rows to screen the vegetable quarters, which at certain seasons of the year are rather unsightly. In any case a well-grown row gives a very pleasing effect when in bloom. When the young plants are a few inches high, they will require to be trained to the poles or stakes, although I believe many people top them once or twice during the season and do away with sticks. This practice is not to be recommended, more particularly in cold districts, as they take much longer to yield.

Watering Newly Planted Crops.—In dry weather these will require to be watered frequently.

This applies equally to seedlings as well as to others of larger growth. This watering is very beneficial in hastening the fresh rooting and setting the plants into growth from the beginning.

The Flower Garden.

Violets.—Young plants that were put out towards the end of last month will require to be carefully attended to at the present time, especially if the weather is hot and dry. Where there is difficulty in keeping them supplied with water, they may be shaded from the direct rays of the sun by placing some ordinary Pea sticks among the plants until they are fairly started into growth. By all means syringe them over on the evenings of fine days.

Polyanthuses.—Seed may be sown now out of doors, or, where only a few plants are required, seed may be sown in a box and placed in a cold frame. When the seedlings are large enough to handle, prick them out into a spot which is partially shaded, and work in a good quantity of leaf-mould to promote a quick growth. Established plants will have passed out of flower, and if it is desired to increase the stock, they may be split up and planted in a position as recommended for seedlings.

Sowing Perennials.—As a rule these plants are not sown early enough, more especially in late districts. Where there is a difficulty in getting plants sufficiently established by the autumn, I would recommend sowing not much later than the present date. Very often they are sown in boxes and pricked out, and finally transplanted into the open border. No doubt there is a good deal to be said for this system; still, where it is at all possible, I think we get better results by sowing in the open. I find we get much stronger and hardier plants, which are therefore better able to pull through the winter.

Rock Garden.—The majority of the plants will now be at their best, and as they pass out of flower they should be gone over from time to time, cutting off faded flowers and keeping down weeds. Make a note of those plants that are required for seed and put a label to them to that effect, otherwise they may be inadvertently cut off in the general clear up. *Primula rosea* grown beside a stream has been especially fine this season, and where it is intended to increase the stock, the plants should be divided and replanted with care, as they resent any careless handling.

The Hardy Fruit Garden.

Raspberries.—As the young growths advance, keep them well thinned out, only retaining the most likely shoots to produce next season's crop. We usually allow far too many canes to remain, with the result that they grow into a perfect tangle, and even the best of them are indifferently ripened. If the plants were not mulched with manure, as previously advised, no time should be lost in seeing to this very necessary work.

Strawberries.—These will now be in flower, and more than likely a very abundant crop of weeds will be making their appearance. These should be removed at once, as if left they seriously interfere with the swelling of the fruit, besides the chances of their running to seed. Have all the protecting material put down at once.

Fruits Under Glass.

Orchard-House.—As all the fruit will now be swelling, it will be necessary to maintain a buoyant atmosphere. On fine days use the syringe freely to keep aphids in check, and it will still be necessary to exercise care in ventilating. Keep the young growths pinched rather closely, as if this is done systematically there need be no fear of the fruit receiving a check from this pinching.

Peaches and Nectarines.—Trees that are approaching the stoning stage should be kept somewhat cooler; indeed, they must not be excited in any way. When, however, they commence the second swelling, they should be assisted with frequent applications of liquid manure. The crop must be regulated according to the state of the trees, and the temperature should be allowed to rise considerably by closing the house early in the afternoon. On the approach of the ripening stage they must have a constant circulation of air.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

ALL the plants, except, perhaps, a few of the late-struck ones, intended for flowering on single stems in small pots will now be growing in open quarters. The special ones referred to will require the protection of a cold frame with the lights off for a week or so longer.

Close Spacing of Plants.—When young plants are first removed to open quarters, it is advisable to stand them rather close together for a week or ten days. If, however, they remain so for a longer period, many lower leaves will suffer. Exclusion from full light sadly weakens them, and, although they do not fall off at once, they do so prematurely later on in the season. Place the plants in rows at least a foot apart until they are finally repotted, and then, after that operation, the large pots may be placed close together for a week or so before they are arranged in rows several feet apart for the summer months.

Feeding and Repotting must be done every week where a cultivator has to keep up the general good health of a large collection of plants. I would not hesitate to shift a plant which badly needed more rooting space in a 4½-inch pot to a 6-inch one in the middle of May, and so defer the final potting of that plant by a fortnight in consequence, than let it remain in the smaller pot and then transfer it to the flowering pot a fortnight earlier than is reasonable, or else let it remain the extra time in the smaller pot and deteriorate to a certain extent. This occasional shifting on of young plants by degrees tends very materially to maintain the whole collection in a high state of health. There are always many plants in a collection at this season that are benefited by occasional doses of liquid manure, and some with very hard stems and toughening leaves will be benefited if given a dose of nitrate of soda at the rate of a teaspoonful to a gallon of water. Such plants must possess a fair number of roots. When this is applied, the soil must be still in a moist state from a previous watering with clear water.

Poor Loam for Final Pottings.—The compost acts as a storehouse for food and a home for the roots of the plants. A vast amount of nourishment can be given through the medium of the poorest soils, but where possible a rich loam should form the great bulk of the compost for the final potting. All cultivators, however, cannot procure such good loam, and must be content with that of a poor nature. The poor loam, however, can be improved if it is procured several weeks prior to the date of using it. First chop it into medium-sized pieces with a spade, and then reduce it by hand pulling. Spread it out in an open shed or in a shady place outside, and pour some rather strong liquid manure on it—enough to saturate the whole mass through. Then throw up the loam to form a conical-shaped heap and cover it with boards or mats until the time comes for the final potting. The other ingredients may with advantage be added to it ten days before. This is a good plan to adopt with composts, both rich and poor. The mistake is often made of chopping the turf into small pieces; but experienced growers know the advantage of pulling the loam to pieces by hand.

Avon.

THE TULIP TRIALS AT WISLEY.

THE second and last meeting of the joint Tulip Nomenclature Committee was held at Wisley on May 6 and 7, when the Cottage and Darwin varieties were all carefully gone over and the names put right or noted as correct.

An accurate colour and base description of each variety is being prepared, and after next season, when the trials will be repeated, a list will be issued under the joint auspices of the Royal Horticultural Society of England and the Bulb Growers' Association of Holland. In this there will be a description of all the Cottage and Darwin varieties, with illustrations of typical bases and a list of synonyms. The committee is constituted as under: Dutch members—Mr. E. H. Krelage, president of the Dutch Bulb Growers' Association; Mr. J. Roes, chairman of the Tulip committee of the Dutch Bulb Growers' Association; Mr. Jan de Graaff, a member of the Council of the Dutch Bulb Growers'

wanted, and should do much to instruct the Tulip-loving public as to how to recognise the various types of breeder, Cottage, Darwin, Parrot, &c.

The Tulips at Wisley were in excellent condition, and it was evident that great pains had been taken in their culture, or after the trying time of drought, and then of wind and rain, which they had gone through, it would have been otherwise. Readers should make a mental note of the repetition of these trials next year with the idea of paying them a visit. It is anticipated that additional lots will be sent for planting. As there were about four thousand planted last autumn, which will nearly all be replanted next autumn, as well as any fresh ones sent in, there should be a great display, which it will be worth while anyone seeing and studying.

MAY-FLOWERING TULIPS.

(DARWINS.)

NICOLAS VAN KAMPEN AND SON were celebrated florists who flourished in Haarlem in the eighteenth century. So wide was their trade that



A VIEW IN THE TULIP TRIAL GROUNDS AT WISLEY.

Association and a member of the Royal Horticultural Society's Daffodil and Tulip committee; and Mr. Thomas Hoog, a member of the firm of G. C. van Tubergen of Haarlem, famous for the collection of Tulip species. British members—Mr. E. A. Bowles, chairman of the Royal Horticultural Society's Daffodil and Tulip committee; Mr. P. R. Barr, a member of the Royal Horticultural Society's Daffodil and Tulip committee and of the Council of the Royal National Tulip Society; Mr. G. W. Leak, a member of the Royal Horticultural Society's Daffodil and Tulip committee; Mr. A. D. Hall, the Rev. Joseph Jacob and Mr. Walter T. Ware, members of the Royal Horticultural Society's Daffodil and Tulip committee and of the Council of the Royal National Tulip Society; and Mr. C. W. Needham, treasurer of the Royal National Tulip Society.

I might also mention that a scheme of garden classification is under consideration, and it is proposed to issue this at the same time as the descriptions and synonyms. Such a scheme had

they issued lists of bulbs in English and French, as well as in their own language. I have such a list before me now, dated 1770. It contains the names and descriptions of all the Tulips, early and late, in their extensive collection. It is hardly necessary to say that these are almost entirely striped or rectified varieties. A casual remark in the description of an early one named L'Abîme (The Abyss) tells us what their feelings about the self-coloured or breeder forms were. Here it is: "The breeder of Hecuba, perfect in every respect, but only a breeder." "But only a breeder"; there's contemptuousness for you. But so it was, and so it continued to be until very modern times indeed. I have seen many illustrations and many lists of Tulips with descriptions from the time of this list of van Kampen's up to the present day, but it is only within the last thirty or thirty-five years that the self varieties which we now call "Cottage" have appeared, and at a later date still, the "Darwins." I have often puzzled my head to know

how it was that these plain or self-coloured forms were never valued in the past. I have many views on the subject, but none quite bears the test of probability and experience. This is my latest. I have in bloom now—or I had until yesterday, May 11, when by far the worst hail-storm that I have ever had in Tulip-time visited my garden—four large beds of old Dutch breeders. As the result of a hint that these were the type of flower that the Pilgrim Fathers used to cultivate in the old land before the Mayflower sailed, my friend Heer Jan de Graaff tells me that the people of the New England States are mad about them. They are undoubtedly a little sad and dull-looking, and I am now wondering if this can be the key to such a remark as "only a breeder." Put such kinds as Vertumnus, Charles Dickens, General Ney and Le Grand Conquereur, which are some of the best of them, side by side with Petrus Hondius, Farncombe Sanders and Pride of Haarlem, and ninety-nine people out of a hundred would prefer the latter for garden decoration on account of their brighter and gayer colouring.

I find the old saying of every dog having its day is, roughly speaking, true of Tulips. Where they are not wanted for cutting and where there is no drawing-room to think of, bright pink and lavender and mauve Darwins seem to be the ones most admired at the present time. Erguste and Euterpe are always singled out, the first being a blue mauve, and the second a pink mauve and rather a larger flower and taller plant. Both are very lovely. A third variety of an even more fascinating shade is the old Cottage Darwin-looking variety Salaman, with its pure white base and silvery tone. In its general shape it very much resembles a Darwin. It is useful for a succession, as it blooms a week later than the two mentioned. In the larger and more robust-looking deep greys and dark mauves there is the same difference between the two most often seen, La Tristesse and Remembrance, as between Euterpe and Erguste. The first have a more rosy look in their young state and developing with age into more of a bicolor, as the three inner petals take on a pearly grey, which contrasts sharply with the darker purple of the exterior ones. The largest and tallest is Ronald Gunn. He looks as if he had gone to a fancy-dress ball as a billiard cue. The white tip is characteristic of youth. With age it either disappears or the grey edges of the petals develop and it is lost. This is a very handsome Tulip. Of the real darkies, such as La Tulipe Noire, Ph. de Commynes, Faust, Black Night and Zulu, none is more effective, nor has any been more admired with me, than Fra Angelico. It has a large, round, open flower, and always looks so rich and glossy. Background is everything to these dusky gentlemen. I have more than once seen bedding effects marred by this not having been thought of. There comes to my mind now a row of bright reds and yellows, and in their midst unaccountable gaps. Have there been failures? No; it is only the dark Ph. de Commynes or Leonardo da Vinci that do not show. As Fra Angelico is one of the earliest Darwins, I would suggest Faust for a second dark, or (only I fear the price is high) Ravenswing. Both are exceedingly handsome, long-shaped flowers, and contrast well with the rounder-shaped "Fra." Bright pink and cerise shades have been much noticed this season. I have only a hundred or so bulbs of the fascinating Louise de la Vallière, but no one passed it without remarking upon its beauty. I call it a warm

soft rose, with just a suspicion of a salmon shade all over it. Then there is Petrus Hondius, a large and more open bloom, not quite such a tall grower and with more carmine in its composition—exceedingly bright; in fact, one of the brightest of all Darwins. A later bloomer which somewhat takes after Farncombe Sanders in colour is Galatea. I have found it very satisfactory in every way—bright, large and tall.

The scarlet red shades seem down on their luck. A lovely richly coloured bed of the truly magnificent City of Haarlem is invariably passed by. So is Feu Brilliant, and so are Nerine, Scarlet Beauty, Laurentia and Teddy. And yet the latter's nearest companion, Maiden's Blush, a pretty rose pink with a very wide, pronounced blush edge, is usually singled out. Another of these pinky rose bordered varieties that almost everyone has passed some appreciative remark upon is La Fiancée. Tall and *embonpoint* she stood among her compeers. It seems she must be noticed even to the very end. I think I have four of the very best yellow-browns: Gondvink, the tall, large, tortoiseshell-comb coloured one; Clio, the rice baked biscuit; Golden Bronze, rich gold and brown; and Quaintness, a somewhat pale-looking brown, with the edges and the interiors of the petals of quite a yellow shade. These are among the kinds that are so popular over in America, and as I am very partial to them myself, I think it shows Brother Jonathan's good taste. The dark purples, by which I mean such varieties as Frans Hals, The Bishop, Jubilee, Viking, Moralis, Velvet King, Valentin and The Giant, seem to be, with the exception of Moralis and Valentin, redder than usual this spring. I thought the same one year before, but I am never able to decide whether it is imagination or reality, for I know how difficult it is to carry an accurate impression of colour even from day to day. Probably Valentin has been more admired than any other Tulip in my garden. The silvery-looking bluish purple of its immense flowers, borne as they are on long stems, at once catches the eye, and it keeps on doing it; it is such a wonderful luster. Out first, it is still there even when the Darwin season is far advanced. My great favourite, the deep blue purple The Bishop, attracted everyone last year whenever it was shown, and was eagerly bought up. There is nothing with quite the same rich deep blue tone among the purples, for usually they incline very much to the red side. Viking is as near to it in colour as any, but it is more of a bicolor, the exterior of the inner petals being so much paler than the outer ones that the solid self look of The Bishop is wanting. Moralis might almost be described as a very dark blue. It is so far away from the red-toned purples that it might well be put in a class by itself. A dark breeder, by name Sappho (syn. Regal Purple), is very much the same colour, and is covered with a similar bloom, just like the well-known Kirke's Plum. Everyone should try Moralis, but it must not be forgotten when assigning it a place that it is one of the darkest of the darks, and must have suitable setting if justice is to be done. The ruby reds must not be forgotten. They are not magentas (that most unfortunate colour that no one, or *hardly* anyone, likes); but they have each of them a certain amount of blue in their composition. They range from the splendid old Pride of Haarlem to the comparatively unknown Jeffries, which always brings to my mind a parcel of unset pigeons' blood rubies that I once saw in Rangoo Tara

(syn. William Goldring) is a very old favourite with me. It has a large flower of a bright ruby red shade, borne on a plant of medium and quite sufficient height. Palisa is the only other one of this colour group that I will mention. I call it one of my 1914 finds. It happened in one place to be next to Sierrad van Flora, and the two made such a capital and novel combination that I feel I may suggest it as a possibility for next season. Both will be found among the cheaper ones, which is a point in their favour. The colour of Palisa is a bright-looking, deep-toned ruby red.

Wall-papers, cloth clothes (for I dare not suggest that there is the same perplexity among the fair sex as among us men) and Tulips are all in the same category when with many spread before us it comes to making a final decision. Even now I want to erase some of what I have just written and put in other names. I do envy a man who can choose, such, let me say, as Mr. Leak of Messrs. R. H. Bath, Limited. He and I were among those who went to Wisley to judge the Tulip trials. Although there was not every Darwin in the world there, the number of those that were was legion. We both utilised our bit of breathing-time before we left by quickly going over them. When the sand was nearly run out, he surprised me by saying, "I have selected what I consider the six best." It will probably interest my readers as much as it did me to know what a man of such wide experience chose. In alphabetical order they are as follow: Alata, a warm pink with a lovely blue base; Andromaque, a fine deep cherry crimson; Anton Mauve, a tall plant after the type of Ronald Gunn and Remembrance, but the mauve in the exterior segments is much redder, while the edges have the same silvery shade; Georgia, just missed being a magenta, and as a woman who has just missed being pretty is plain, so, *vice versa*, just missed magenta means lovely—it has a white base, and is of the open shape of Bleu Aimable; Scarlet Perfection, an eye-opener; and Venus, a beautiful old rose with a white base. JOSEPH JACOB.

A LITTLE - KNOWN ROSE.

ONE of the most delightful and brilliant coloured of the Hybrid Perpetual group is, strangely, very little known; indeed, I do not know any English list that contains it. The name is François Coppée. It was raised by Ledechaux and introduced in 1895. The colour is a brilliant velvety crimson, a mixture almost of Xavier Olibo and Eugène Fürst; indeed, it somewhat resembles the latter in form, but has a more fiery scarlet towards the edges of the petals.

We shall make a great mistake if we allow some of these old Hybrid Perpetuals to be lost. Where are there any among the Hybrid Teas Roses to equal them for colour, form and fulness? Take our old favourites Victor Hugo, Louis van Houtte and Charles Lefebvre. Why, they are equal to anything among the Hybrid Teas. Of course, they do not give us much in the autumn; but still, they are superb, and we must retain them at all costs, even if they have to be relegated to the spare garden. A row or two of these gems planted in the kitchen garden would be of great usefulness to blend with the yellows and pinks of the Hybrid Teas when they are culled for the house, and if they are obtained on the Briar, they will give a fine display quite late; at least, most of the varieties will do so. DANECROFT.

THE GARDEN.

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MAY 30, 1914.

NOTES OF THE WEEK.

Attendance at the Chelsea Show.—We understand that the attendance at the Chelsea Show created a record. No fewer than 23,000 persons paid for admission. When we remember that there are about twenty-seven thousand Fellows' tickets available, and that these are used freely throughout each day, some idea of the total number of visitors is obtained.

An Early Harebell.—All who have a rock garden, whether large or small, should include Steven's Harebell, *Campanula Stevenii*. It is the first of the genus to greet us, and the attractive blue flowers are borne in such profusion as to almost hide the plant. There is a variety, *nana*, which differs very little from the type, except that the flowers are practically sessile among the leaves. The white variety also is very beautiful. All must be planted in well-drained soil.

A Useful Early Border Plant.—*Thalictrum aquilegifolium*, the Tufted or Feathered Columbine, is without doubt the best of the Meadow Rues. In flower it is particularly charming, and is sure to attract attention when seen in well-established groups, as the corymbose panicles of creamy purplish blossoms are very striking, and the foliage handsome and distinct. There are several well-marked varieties, all of which are worthy of cultivation. They are not particular as to soil, but should be left alone for a few years.

Pentstemons and Antirrhinums.—These are to a large extent displacing the more tender subjects in the adornment of our flower gardens, and this is not to be wondered at, seeing they give a wealth of bloom over such a long period and can be grown by the novice. No time should be lost in getting them into their flowering quarters, as everything depends on a good start. In planting, do not overcrowd in the bed, otherwise they cannot produce such handsome spikes as we associate with these plants.

Ten-Week Stocks and Asters.—These should now be ready for planting out, and in doing so it will be advisable to give them a little more attention than they often receive. We are usually very careful about attending to the little details as to the sowing of the seed, but the planting out is often done in a very haphazard way, with the result that half the beauty of these delightful annuals is lost. Should the soil be of a heavy nature, fork in some light material, such as old potting soil, and some well-rotted

manure. In planting, select a dull day, and with this little extra care it is surprising the difference one gets in the results.

Damage Caused by Lightning at Kew.—Two trees were struck by lightning during the severe thunderstorm which swept along the lower reaches of the Thames Valley on the evening of May 22. One of the trees was a large Sweet Chestnut standing near to the stables in the Arboretum, and the other a Cedar in the Cedar Avenue near to the Pagoda. In the latter instance the bark of the tree was stripped in spirals, the shattered bark and cones being distributed on the ground around the tree. Two flagstones

Growing Tomatoes in the Open.—Plants must be well hardened before they are set out, and if showing their first bunch of flowers, so much the better. The soil should be well prepared and a small quantity of decayed manure incorporated with it. If space is available on a south or west wall, there can be no better position for them.

Our Chelsea Show Number.—We wish to thank the numerous readers who have written such highly appreciative letters about our Special Chelsea Show Number. This special issue was quickly sold out, but to meet the demand we had a few extra copies printed. Anyone who failed to secure one can obtain a copy direct from this office, post free 2½d. We also thank them for their kind congratulations and the judges' award of a silver Flora medal. THE GARDEN was the only horticultural paper to receive an award from the judges.

Sun Roses for Dry, Sunny Banks.—

Few plants are more valuable for such positions than the *Helianthemums*, which are now giving their masses of flowers, from purest white to deep crimson, with almost every intermediate shade of colour imaginable, completely hiding the foliage and producing such a blaze of colour as is seldom found in any other class of plant. The warmer the position the brighter and freer they flower, and they are ideal subjects for such places, where the majority of plants would fail. They are readily raised from seed or from cuttings.

Royal Gardeners' Orphan Fund.—

At the twenty-sixth annual dinner, held recently under the presidency of Baron Bruno Schröder, the sum of £1,200 was collected in aid of this very deserving charity. This is the second highest amount that has been collected at the



A GRECIAN WOODRUFF, *ASPERULA SUBEROSA*, IN THE ROCK GARDEN. IT HAS DAINTY FLOWERS OF A PLEASING PINK SHADE.

in the pathway near to the Japanese Gate were moved from their positions by lightning, one of them being turned completely over.

A Grecian Woodruff (*Asperula suberosa*).—This beautiful little plant, with dainty pink flowers and woolly foliage, is well adapted for a dry corner in the rock garden. Like most other plants with woolly foliage, it needs protection against damp, especially during the winter. June is its month for flowering, but this year, owing to the spell of warm and dry weather, it is flowering a little before its time, and many an alpine garden is all the more interesting owing to the presence of this pretty mountain flower. It is synonymous with *Asperula Aethoa*.

annual dinner. There is reason to think, however, that further subscriptions will be needed to meet the many distressing cases that are brought before the committee. Since the election of candidates in February there are already sixteen orphans awaiting the help extended by this charity. The Fund makes an allowance to aid in the maintenance and education of the orphans until they reach the age of fourteen years, and assists them in the purchase of clothing or tools or in providing apprenticeship fees when they are commencing to earn their own livelihood. The secretary is Mr. Brian Wynne, 19, Bedford Chambers, Covent Garden, London, to whom all communications should be sent.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Protecting Gentians with Glass.—I also had very good results from covering the Gentians as recommended by Mr. R. A. Malby in *THE GARDEN* last year.—R. H. H.

Tulip Yellow Rose.—This is a very old double variety, seemingly derived from *Tulipa suaveolens*. At any rate it is sweet-scented; but its greatest charm is its colour—like splashes of yellow May butter. I used not to like it on account of its flowers being so heavy that they always bent to the ground. But that failing, like some others, is not without its compensations, and the large, sprawling lumps of yellow lying on the ground are forgiven for their exquisite colour tones, and in sunny weather they are not at all out of place in that lowly position.—R. P. BROTHERSTON.

Beautiful Seeds.—As I have been an interested reader of *THE GARDEN* for several years, I have been rather disappointed that mention is seldom

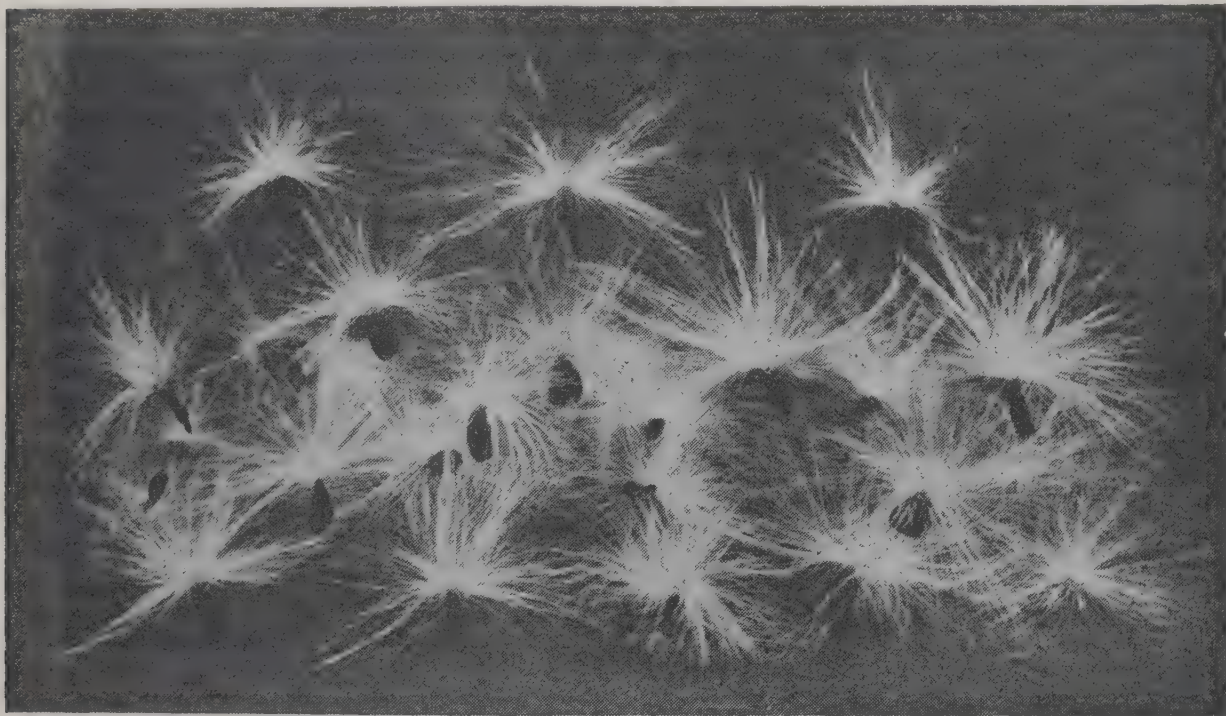
Tulips branched last year, with the exception of *Fashion*, which is known to have a leaning that way. There are no more interesting plants than these late Tulips, and if anyone is thinking of going in for them for the first time, let me suggest that they include in their lists *Isabella* and *Fashion*, for it is most fascinating to watch the extraordinary change in colour which takes place in these Tulips during the four weeks that each flower is out. Some Tulips fade early, but these two improve steadily. Another Tulip of great interest is the mahogany *Dom Pedro*, which I saw spoken well of in *Country Life* last year, and as a novelty it is well worth having.—(Dr.) R. C. LOWTHER, *Grange-over-Sands*.

School Shows.—As a result of a recent article of mine on the subject of school shows, I have had an interesting communication from the Chairman of the Grange School Board, Banffshire, who has initiated a show for the three schools under the Board somewhat on the lines of our own. The Grange Show was entirely confined to members of the *Narcissus* family. Essays and notes on the growth of the bulbs, and coloured and black-and-

note on the above subject. I do not expect my sport will prove constant, for the plant from which it sprang was gathered as a white-flowering variety, and it also flowered white last year with three or four flowers. On watching it this year it was found to have one flower of the normal blue, one quite white, excepting the green-speckled throat, and, lastly, that flower with the two shades together. I have not had the heart to disturb the plant, as we cannot congratulate ourselves that *G. acaulis* has satisfactorily established itself; but I hope to find out yet whether all these three varieties come from the same plant. Following up my note in your issue for July 26, 1913, page 376, on "*Gentiana verna* in Grass," when I reported a first success of twenty-eight flowering plants from my annual sowings, I may briefly state that this spring there were 114 such, besides innumerable small seedling plants, and having scattered 100,000 seeds (which means millions of grains) last autumn, I hope I shall live to see the lovely sight of them flowering yet.—E. HEINRICH.

Fragrance in Sweet Peas.—As one who has grown Sweet Peas for a few years, and who has chosen the varieties recommended by the National Sweet Pea Society, as well as others of my own choice, I can, with regret, bear out what your correspondent B. W. Lewis says in *THE GARDEN* of May 23, page 255, with regard to the loss of perfume in the newer Sweet Peas. But there is one Sweet Pea (which I grow for garden decoration and cutting) which stands out clear in front of all others in good points on my heavy soil. It is the strongest grower, and gives the largest bloom (excepting *King Manoel*) of a pleasing colour, four on nearly every stem, which is very long, and last, but far from least, it possesses a most delicious perfume. It is the bicolor *Mrs. Cuthbertson*.—H. P. B., *Bristol*.

Too-Much-Alike Auriculas.—In response to "Taplow's" request for a list of alpine varieties, I beg to submit the names of a few selected from my stock of seventy different named kinds. These cover a wide range of colours, and have been in commerce for several years, and should not be expensive. If so, I would suggest to your correspondent that he joined one of the societies which make a speciality of this fascinating flower, and I think he will find the members ever ready to supply him with a few surplus plants. Gold centres: *Chamoise*, *Charmer*, *Duke of York*, *Ettrick*, *General Buller*, *George Cadbury*, *J. F. Kew*, *Majestic*, *Muriel*, *Pluto*, *Unexpected* and *Violet Vanbrugh*. Light centres: *Admiration*, *Argus*, *J. T. Bennett-Poë*, *Blue Bell*, *Phyllis Douglas*, *Prince of Tyre*, *Thetis*, *Mildred Jay* and *Janet*. I wish to state that this list includes some varieties which are not quite up to the standard required for show purposes, but have been included on account of their charming colours; for instance, *Admiration*, a lovely shade of porcelain blue; and *Chamoise*, deep apricot. As alpine varieties make numerous offsets, a good stock is soon attained. If your correspondent only requires the plants for decorative purposes, he should obtain a packet of seeds from Mr. James Douglas or Messrs. Phillips and Taylor, and he would get a wonderful range of colouring; but some patience is required, as it takes two or three years to obtain good flowering plants. Some of the brightest colours come pin-eyed, a serious defect in the eye of a judge; but a place can be found for them on the rockery or slightly shaded border.—LANCASHIRE. [We are compelled to hold over until next week other interesting correspondence on this subject.—ED.]



SEEDS OF *CARALLUMA SIMONII*. THE SILKY STRANDS ATTACHED TO EACH ARE VERY BEAUTIFUL AND FORM A READY MEANS OF DISTRIBUTION.

made about Cacti. There must be many lovers of these curious plants, so I have pleasure in sending herewith a photograph that I have just had taken of the ripe seed of a succulent plant called *Caralluma Simonii*. The blooms are of a dark brownish colour and shaped like a star. The plant from which this seed was taken bloomed in 1912, and last year the pods were formed. These pods have just opened, revealing a dozen or so fine silken puffs, one of which I am sending you. Some of your readers may be interested in this picture, and I should be glad if you are able to use it.—ALFRED BENTLEY, 27, *Wards Road, Seven Kings, Essex*.

May-Flowering Tulips.—One of my late Tulip beds has proved of unusual interest this year, since a large number of the stems have carried four or three full-sized flowers. These include *Fashion* (4), *Jaune d'Œuf* (4), *Inglescombe Pink* (3), *La Merveille* (4), *Ravenswing* (2), *Globe of Fire* (3), *Fairy Queen* (2), *Calypso* (2), &c. Nearly all the *Fashion* bulbs have three strong stems, the branch taking place above the leaves. I daresay this is quite common, but none of these

white sketches of the flowers added interest and utility to the competition, and were adjuncts which may be brought in where circumstances permit. From correspondence between the masters of the schools and Mr. Pritchard, I cannot help feeling that the educational side is thrust rather too much down the children's throats. Overdone, it may have the diametrically opposite effect to that which I for one would wish these shows to have, viz., the fostering or the sowing a love of flowers for their own sake. I would not like a school show which is only the Black Currant jam for the powder. I think, too, it is better to have several sorts of flowers grown, and not only Daffodils. If it was Daffodils one year and Hyacinths the next, it would not be so bad; but give me variety.—JOSEPH JACOB.

Gentiana acaulis Sporting.—As on the occasion of the recent opening of our spring flower show at Munich I had the honour of presenting to one of the Royal Princesses a peculiar flower of *Gentiana acaulis* showing the true Bavarian colours, pure white and blue (lengthways divided), I was much interested in Mr. R. R. H. Hayes' (Keswick)

Chair Cane for Sweet Peas.—The writer of an interesting note in *THE GARDEN* recently advocated the use of chair cane for training Sweet Peas. He said it costs 6d. a pound. I can only find prices running from rs. 6d. a pound upwards.—**E. P. DEAN.**

The Double-Flowered Gorse.—Apart from the fact that when in bloom this is a really gorgeous shrub, it has also other highly meritorious features. The principal one is that it will thrive in dry, stony soils, even on hot banks where practically nothing else can be depended upon; in fact, under such conditions it is far more floriferous than in a deeper and richer soil. One especial point to bear in mind is that the double-flowered Furze or Gorse very much resents transplanting; hence it should be grown in pots till placed in its permanent quarters. Cuttings put in sandy soil in a shaded frame in August will soon root.—**H. P.**

Primula Leddy Pilrig.—The hybrid *Primula* called *Leddy Pilrig*, which obtained a first-class certificate from the Royal Caledonian Horticultural Society at their spring show on April 29, is quite a good plant, and rather pleasing with its whorls of soft rosy flowers. It was raised at *Pilrig House*, Edinburgh, by Mr. Robertson, the gardener there, and its parentage is given as *P. beesiana* and *P. bulleyana*. Some good authorities are disposed to doubt the correctness of this, but the raiser has doubtless the best knowledge of the matter, although there are suggestions of the pulverulenta "blood" in the appearance of the plant. The *Primula* has the foliage of such plants as *P. pulverulenta*, *P. bulleyana* and others, and looks as if it would prove a free grower and good bloomer. There are only a few plants in existence as yet; but, as it is likely to increase well by division, it should soon be plentiful.—**S. ARNOTT.**

Cytisus Daisy Hill.—The note which appeared on page 241 of *THE GARDEN* regarding the two beautiful Brooms (*Cytisus præcox* and *C. albus*) brought to my mind another very pretty variety which is not often seen, but one which, on account of its unique and distinctive character, deserves to be more largely planted than it is. *C. Daisy Hill* emanated from that well-known home of hardy plants at Newry, Ireland, whence it takes its name. It is quite distinct in coloration from any other Brooms of my acquaintance, being a combination of yellow, rose and violet crimson, which must be seen to be fully appreciated. In every other respect it resembles the common yellow Broom, and is equally as hardy and floriferous. Those interested in these handsome, easily grown shrubs and in search of something novel should secure a plant or two of this variety, and I feel sure they would be delighted with the charming effect made by the rather unusual combination of colours. While on this subject I would call attention to another choice *Cytisus*, which flowers during the late summer and autumn, at which period its rich golden blossoms are much appreciated. This is *C. elongatus*, a neat, erect-growing shrub of great beauty, carrying graceful sprays of bloom from 1½ feet to 2 feet long. It grows equally as freely as the other Brooms, but is more neat and compact in habit. It flowers with lavish profusion and ripens its seeds freely, thus affording a ready means of increasing the stock. Both of these shrubs last year flowered with great freedom in Mr. Brough's garden at Ochilview, Perth, standing out conspicuously among the comprehensive collection of choice shrubs grown there.—**W. L.**

Primula floribunda.—Since the advent of *Primula kewensis*, one sees very little of *Primula floribunda*, though it is, I think, so pretty and so continuous flowering that its merits ought on no account to be passed over. It is a native of the Himalayas, and has been grown in this country for fully thirty years. Grown from seeds, which is the best way of increase, it forms a rosette-like tuft of leaves, which soon produces several offsets. The flower-stems, which in good examples are numerous, reach a height of about nine inches, and bear small, bright golden yellow flowers disposed in whorls. Fresh spikes are continually pushed up, so that its season of blooming is a very lengthened one. There is a variety—*Isabellina*—in which the flowers are of a paler yellow than those of the type, but, to my mind at least, it is much less effective. Seed of *P. floribunda* ripens freely, and from this young plants should be raised, as those obtained from division are much less satisfactory. Apart from its own intrinsic merit, *P. floribunda* is of especial interest as being one of the reputed parents of *P. kewensis*, which originated as an accidental seedling.—**H. H.**

Our Native Flowers.—It is very interesting to note how much alike our native flowers are, even in widely separated districts. I was forcibly struck with this when reading in *THE GARDEN* for May 9 about the fine display of Furze and Marsh Marigolds near Bournemouth. Here, in South Ayrshire, we have had very fine shows of both the above-mentioned plants during the past fortnight, and the bright blossoms still continue to beautify the landscape. Another shrub which is very abundant in this district is the Sloe, or Blackthorn, and this has been flowering with lavish profusion this spring, great drifts of snowy blossoms being in evidence everywhere, the purity of the blossoms being thrown into bold relief by the black stems of the shrubs. I have never seen such a profusion of the woodland Windflower (*Anemone nemorosa*) as is to be found in this locality. Myriads of the lovely starry blossoms are met with everywhere, in sun or shade, just as numerous as the Daisies in field and glade. The blue Wood Hyacinth is now opening its drooping blue bells in the woods; in many places, so thickly are they crowded together that nothing else can grow. The Golden King-cup (*Caltha palustris*) is particularly robust this year, probably because it has had no lack of moisture. Sulphur Primroses and blue Forget-me-nots bestud the hedgerows and brighten the roadsides with their dainty blossoms, associated with the modest little Dog Violet (*Viola canina*). With such a wealth of beautiful gems among our native flora, why should travellers risk their lives amid the Swiss glaciers or Italian earthquakes to see flowers no prettier and scenery no grander than our own?—**W. L., South Ayrshire.**

FORTHCOMING EVENTS.

June 2.—Scottish Horticultural Association Meeting.

June 3.—Royal Horticultural Society's Exhibition.

June 4.—National Hardy Plant Society's Show at the Royal Horticultural Society's Hall. Linnean Society Meeting.

June 5.—Dundee Horticultural Association Meeting.

June 6.—Société Française d'Horticulture de Londres Meeting.

June 8.—United Horticultural Benefit and Provident Society's Committee Meeting.

"THE GARDEN" PLANNING AND PLANTING COMPETITION.

OUR competition for planning and planting the little garden has created widespread interest, and, judging by the number of letters we have received, there is a very great demand for good designs for little gardens. Full particulars of the competition were published in our issue of the 18th inst.; but for the benefit of those who may not have seen that issue we may briefly state that we are offering cash prizes of the total value of £33 12s., as well as a number of book prizes, for the best designs sent in. On page IV. of this issue we insert the coupon that must be sent with four penny stamps to cover cost and postage of the sheets on which the outline plans are printed, and on which the designs must be drawn. A number of questions have been raised relating to the competition, and, as we stated in our issue of May 18, these questions will be fully answered in our next number. Those who have not seen the rules and conditions governing this competition may secure them by applying to The Editor of *THE GARDEN*, 20, Tavistock Street, Covent Garden, London, W.C., and enclosing 1½d. in stamps to cover cost of postage.

THE JAPANESE PLUM IN AMERICA.

YOUR reference to the Japanese Plum (*Prunus triflora*) in April 18 issue, page 195, and the pessimistic report of its value as a fruit tree, lead me to say that this species has had a striking and peculiar career in America.

It came conspicuously into public notice about twenty-five years ago, at which time a large number of varieties were distributed by American nurserymen. Some of these were direct importations from Japan, others were seedlings accidentally picked up in America, while a few were artificial crosses made by gardeners here. For a time it seemed that these Japanese Plums would supersede all others in our commercial orchards, and even in the gardens of amateurs. Some ten or fifteen varieties became very popular and were planted everywhere. In some cases these did prove a commercial success, at least for the time being. They proved at least to have many valuable qualities combined with certain distinct defects. They are easily propagated, grow rapidly in the nursery, are easily transplanted to the orchard, come quickly into bearing, and some of the varieties yield enormously. They are excellent for preserving, jelly making, &c., and being of good size and attractive colour, sell fairly well in the open market. The trees are, unfortunately, short-lived and subject to the attacks of insects and diseases. Many of the varieties which at first promised well have in the long run proved worthless. So many disappointments have come from planting the different varieties that the popularity of this species has now greatly waned. In the meantime the Japanese Plum has been extensively used in hybridising. It crosses very readily with other species—much more readily than the common garden Plum (*Prunus domestica*). In the Central States, where Plums of native American species are extensively grown, these hybrids have arisen in large numbers. Several

of these hybrids, especially those between *P. triflora* and *P. hortulana*, have shown much value and are being propagated and cultivated on a considerable scale. It was also found that *P. triflora* would cross readily with *P. Simonii*, and that the offspring was usually a conspicuously fine fruit. Varieties of this cross nearly always have large fruits of solid flesh, which handle well in the market, though the quality is usually inferior. Several of these varieties were put on the market and widely distributed by the nurserymen. For a time it seemed that they would achieve a commercial career, but at present they have largely disappeared. There is hardly a more interesting chapter anywhere in the history of pomology than the story of the Japanese Plums in America. They have had a wide and varied development, all the events of which have taken place so recently that the facts are well known to nearly all horticulturists now living.

F. A. WAUGH.

Massachusetts Agricultural College.

HARDY JAPANESE PRIMULAS.

JAPAN has made an unexpectedly small contribution to the hardy Primulas which are in cultivation, and, even if we include those which are yet to be brought to our gardens, the known species and their forms are wonderfully few in number. Only eleven species are native, eight of them endemic. Counting microforms which are considered distinct enough to receive separate names, there are, in all, some fourteen distinct named Japanese Primulas, although, as usual, all botanists are not prepared to accept this enumeration. Of those which are in cultivation, the pride of place must be given to two species, both of which have become highly important garden plants. These are *Primula japonica* and *Primula Sieboldii*, the latter often known as *P. cortusoides amoena*, though not a form of *P. cortusoides* of Linnæus, which is not Japanese. No fewer than eight species of Professor Bayley Balfour's arrangement of the Primula species are represented in the few Japanese Primulas. Taking in alphabetical order, and dealing with *P. Sieboldii* under its proper name, we come first to

Primula eximia (Greene).—This belongs to the *nivalis* section, one containing many charming Primulas, though represented in Japan solely by this, which is a microform of *P. nivalis* (Pallas). It is a sturdy, robust little plant, with flowers of a good size when compared with the plant itself. The authority for the name is Greene, in "Pittonia," III. (1897), page 251. This Primula is glabrous and has oblanceolate or oblong spoon-shaped leaves, which are entire or minutely crenated, acute or obtuse, and on short petioles. They

are without farina. The robust scape rises well above the leaves, and bears an umbel of from six to ten flowers of a purple colour. It occurs in the Kurile Islands, and also extends into the Aleutian and Pribilof Islands. It is desirable that this plant should take the place which the typical *P. nivalis* fails to fill properly in our gardens.

P. japonica (A. Gray).—Described by Asa Gray as far back as 1857, it was not until 1871 that this now indispensable Primula was introduced into our British gardens through the enterprise of Mr. William Bull. It is impossible to overpraise this handsome plant, whose tiers of whorled flowers are so effective in the garden. It is



THE WHITE-FLOWERED JAPANESE PRIMULA: *P. JAPONICA* ALBA.
THIS LIKES MOIST SOIL AND SEMI-SHADE.

naturalised in many places in the more open woods and by the sides of streams and ponds, and is one of the most valuable of all the hardy Primulas. A large colony in flower is a sight well worth seeing. It varies considerably in colouring, but the dark purple form is still the best. The colours range from deep purple to pink, rose, and almost pure white, though in the purest varieties I have seen there is always a coloured ring round the eye. The so-called improved varieties are no improvement. I have seen hybrids of *P. japonica* crossed with *P. Bulleyana*, but these are of no use, being simply both parents practically spoilt—*P. japonica* with only

a slight trace of *P. Bulleyana*. It is a native of Central and Northern Honto, Yezo, and is also cultivated in Japanese gardens. It is unnecessary to give cultural directions, as it will thrive almost anywhere, although preferring a moist soil and a shaded or semi-shaded position. It comes freely from seeds.

P. Kisoana (Miq.).—Why this has not been in cultivation in this country is rather a mystery. It has been grown in Japanese gardens for more than 200 years. Pax refers it to the section Fallaces, but undoubtedly Professor Bayley Balfour is correct in placing it among the Cortusoides. It has petiolate leaves, which are rounded, heart-shaped, also crenate or lobed, while the whole plant is practically villous-pubescent. The scape bears from two to five flowers of a deep rose colour. It should prove quite hardy in this country. A native of South-West Japan.

P. modesta (Bisset et Moore).—*Primula farinosa* is represented in Japan by two plants, although that known as *P. Fauriæ*, Franch., is really only a xeromorph of the above, which is, therefore, sufficient to notice at present. Pax considers *P. modesta* only a subspecies of *P. farinosa*, which it closely resembles; but the farina is golden instead of silvery. It is as hardy as *P. farinosa* or *P. frondosa*, and loves a moist situation. The flowers are purplish. From Yezo to Shikoku, and introduced to cultivation in 1911 by the Royal Botanic Gardens, Edinburgh.

P. Reinii (Franch. et Sav.).—Although not very widely known, the beautiful little Primula Reinii of the Fallaces section of Pax and the Reinii of Balfour has been in cultivation for some years. Its hardiness has not been fully tested, but it deserves a trial at the hands of lovers of the race. It has petiolate, hairy foliage, rounded or kidney-shaped, cordate at the base, with scapes a little longer than the leaves, and bearing an umbel of from two to six pale violet flowers, which are large for the size of the plant. With me this Primula is not hardy in the open, but I can manage it in a cold frame. The section Reinii is marked by the petiolate-rounded leaves, small calyces and cylindrical capsules, protruding beyond the calyx.

P. Sieboldii (E. Morren).—A great deal of confusion exists in gardens regarding the name of this plant. It is frequently sold as *P. cortusoides* or as *P. c. amoena*. *P. cortusoides*, as already mentioned, is not Japanese, but Siberian, and extends in Nature from the Urals to the Altai. This and *P. saxatilis* have adpressed calyx segments, while those of *P. Sieboldii* are patent. *P. Sieboldii* has been in cultivation in Japan for very many years, and it was known to the botanists of Europe in 1838, when it was described under the name of *P. cortusoides* variety *patens*, Turcz., by Turczaninow. In 1873 a cultivated plant was described by Morren under the present name

of *P. Sieboldii*. It had been grown in British gardens before that time, but the date of its introduction is doubtful. It was, however, sent from Japan to Messrs. James Veitch and Sons by their collector, Mr. I. G. Veitch, in 1861, under the name of *P. cortusoides*. Its natural habitat appears to be in moist meadows, but it is best known as a cultivated plant. Its flowers vary greatly, not only in colour, but also in size and form. The colours range from white to rose and purple, and the shape of the blooms is extremely varied, some being rounded and others deeply lobed. It is an easy species to cultivate, but is sometimes lost in winter from the dormant crowns being overlooked when the garden is being cultivated. It is generally hardy. There are numerous garden varieties of *P. Sieboldii*.

Other Japanese species of *Primulas* are *P. Jesoana*, Miq., an unintroducted species allied in appearance and in its botanical features to the other *Primulas* of the *Geranioides* section. It is reported to be of little attractiveness. *Primula tosaensis*, Yatabe, of the *Reinii* section, will hardly prove hardy in this country. Some of the Japanese *Cuneifolia* section, comprising *P. cuneifolia*, *P. hakusanensis*, Franch.; *P. heterodonta*, Franch.; and *P. nipponica*, Yatabe, are in cultivation. *P. macrocarpa*, Maxim., is of purely botanical interest. *P. Miyabeana* (Ito et Kawakana) is from Formosa and close to *P. japonica*, but has not been introduced here. JOHN MACWATT.

Morelands, Duns.

A BEAUTIFUL HABERLEA.

UNTIL a few years ago only one *Haberlea* was known to cultivation, viz., *H. rhodopensis*, native of the Rhodope Mountains. This plant the writer has seen growing in large patches, mingled with the pure white form, in cool, shady places near to the Shipka Pass in Bulgaria. It is an exquisite plant, and the flowers resemble those of the *Streptocarpus*, to which it is related, for both plants belong to the Natural Order Gesneraceæ. *Ramondias*, however, are much closer relatives to the *Haberleas*, and they succeed under similar conditions, viz., on shady banks, packed between rocks and given a fairly leafy compost. The new *Haberlea* named *Ferdinandii-Coburgii* is a grand acquisition to the genus, and it was deservedly granted an award of merit by the Royal Horticultural Society when shown in the early summer of 1911 by Mr. G. Reuthe, Keston, Kent. As may be seen in the accompanying illustration, it has medium-sized, round leaves, and a very free-flowering habit. The flowers are of a bright rosy colour tinged with pale purple blue and deeply spotted in the throat. It is hardy, and worthy of a place in those gardens where little-known alpine plants are cherished. In many gardens *Haberleas* and *Ramondias* are grown with a fair amount of success between vertical rocks. In nature it is supposed that the rosettes of leaves which lie flat against the rocks are thus protected against injury by falling debris from above.

G. Q.

HARDY FLOWERS FOR VASES.

SOME USEFUL HINTS.

THERE is a feeling against hardy flowers for vase furnishing, for which there is no good reason. Over and over again I have been assured that border flowers and wild flowers are wanting in long-standing properties, and that the tender foliage and flowers of shrubs and trees are equally singularly unsatisfactory in that respect. I use all manner of things so long as they are pretty, and by taking a few precautions have no cause to join in the cry against any of these. I have been using the loveliest twigs and branchlets of Morello Cherries, *Prunus Pissardii*, white-flowered Transcendant Crab and Tower of Glamis Apple, as

Lay them in a basket for half an hour and afterwards let them lie on a table till the time to arrange them comes, and it is no wonder that they last for only a short time, and sometimes fail to ever look up or assume their pristine brightness. So important is it that some kinds be placed in water that it is worth while to carry a pail of water and immerse the stems in it as soon as they are cut. Wild flowers need much the same treatment; at any rate, they should be carried home without delay and the stems plunged into water, preferably warm water, till they can be arranged. Some flowers require to be plunged or floated entirely in water. Of such are the beautiful *Helleborus* species, so useful in spring. Improperly treated, these droop at once. In even a few hours they become eyesores; whereas, when thrown into a tank of water and left at least twelve hours till the cells are surcharged, they last



HABERLEA FERDINANDII-COBURGII, FLOWERS BRIGHT ROSY BLUE.

well as of Apples of various shades of pink, though I find the pretty *Pyrus floribunda* rather fugacious and the buds prettier than the flowers. *Deutzias* are now in, *Banksia* Roses in long sulphur ropes, and *Spiræa van Houttei* and others, with bronze-leaved Oaks and thinnings of coloured Rose shoots.

Exceedingly beautiful are the single Tree *Pæonies*, which range in colour from white to crimson and salmon-tinted flowers of exquisite beauty. These and many others last well if, when cut, they are with the least possible delay plunged deeply into water. But what usually occurs is to carry them about or lay them down long enough for the sap to have evaporated so much that incipient withering sets in, after which the chance of the flowers and foliage lasting is reduced to the limit. Exactly the same thing happens with border flowers

a week. I have known them to stand in a cold room for a fortnight if given a second immersion.

There is yet another important point to be observed in selecting border flowers; that is their age. I once used a quantity of *Michaelmas* Daisies to decorate a church, and was warned that they would not stand over the Sunday. The lady who had gained this experience with *Asters* had forgotten to choose young flowers or those that had not been fertilised by insects, and so it happened that those she deprecated the use of, being young, stood perfectly, though they had the extra compensation of having been plunged in water for hours after picking. The advantage of using only young flowers has frequently been noticed, and with bulbous plants it is usually carried out. R. P. BROTHERSTON.

ROSE-GROWING IN TOWN GARDENS.

NOTES ON EXHIBITING.

Shading.—Rose shades are usually made of material that is impervious to light, but it is a mistake to imagine that all blooms will improve in colour from being kept in the dark. Many varieties will only attain their full colouring under the direct rays of the sun. Generally these are in the Tea class, or closely allied to it, Roses which have sprung from natives of a warmer clime. They are impatient of wet and frequently slow in opening, so that they need protection rather than shading. Excess of sunshine will completely spoil the colour of many other kinds, such, for instance, as some of the Pernetiana type, those of delicate shades of yellow and pink, and most of the red Roses. In the case of these it is well to supplement the shades by gumming tissue paper round the rims, allowing it to project a few inches underneath. A great deal may be done with the shades to retard a Rose's development, often a matter of importance at show-time; but in judging beforehand the length of time a bloom will take to expand, the exhibitor has one of his hardest tasks, and this can be learned only by studying the habits of each individual kind, noting whether it is slow or quick in unfolding its petals, and then, as often as not, a change in the weather will upset all one's calculations. As the blooms expand, greater care in spraying becomes necessary. Insecticides should be avoided temporarily and green fly removed by hand. On warm evenings syringing overhead with lukewarm water is very beneficial, but this is not advisable when the weather is cold. The hoe must be kept constantly at work, and this should always be the Rose-grower's chief implement.

Tying and Dressing the Blooms.

In the dressing of the blooms many points may be gained or lost, and the would-be exhibitor should practise it as much as possible some time in advance of the exhibition. The first step is to tie the flowers round the centre with white wool, the kind that is known as double Berlin being the best for this purpose. It should be cut into lengths of about nine inches, and the fastening is done by a double twist of the wool, which prevents it from slipping and allows of it being loosened when necessary. On no account should it be knotted. Generally speaking, it is of no use to keep a bloom tied for more than three or four days; but this depends upon the variety and the weather. In a hot spell many Roses will fly open and become useless in three days, which during a cooler period might often be kept in good form for a day or so longer. Full flowers may sometimes be restrained for a week. The more backward blooms will be tied only a day or two before the show, and most of

these will assume a better and more natural shape if the guard petals are allowed to fall before the ties are placed in position round the second row of petals. Others it may not be necessary to tie at all, but these will be slow-opening kinds which are just caught right and can be trusted not to "fly." Experience is the best guide, and the grower should study his Roses and practise with them before the show-time arrives. The actual dressing of the blooms is performed on the show bench after the tie is removed, the last thing before the judging.

It ought to be done with a large camel-hair brush, and should consist mainly in arranging the outer row of petals. These ought to be gently pushed



PRIMULA FARINOSA GROUPED IN THE ROCK GARDEN SHOWN BY MR. J. WOOD AT CHELSEA LAST WEEK.

back, but on no account should they be turned inside out in an endeavour to keep them open, as is sometimes done. This is "overdressing," and should disqualify a bloom. The arrangement of the boxes must be carefully thought out, care being taken to afford as much contrast as possible by keeping apart Roses of similar colouring. Dark reds are always valuable, and these are usually scarce; but one or more should be included if possible, even if of slightly smaller size than others that are available. The largest blooms must be in the back row, the smallest in front. As many spare blooms as possible should be taken, so that those which show a split centre may be discarded.

P. L. GODDARD.

SOME GOOD ROSES WITH FULL FLOWERS.

WHILE it must generally be admitted that a large majority of the newer Roses are of very wonderful colouring, and are most beautiful from an artistic point of view, it is also a fact that a great many of them are what one might call "thin" in build; that is to say, the petals are few in number. These thin Roses are very useful when used for massing in large beds, where the individual bloom is not of so much account as is the general effect produced by the mass, and they are also very lovely in the bud stage; but I have found that there are many Rose fanciers, especially among those with limited space at their disposal, who will have nothing to do with this class of Rose, and will only cultivate those varieties which might be termed "solid." A bloom of one of these more double Roses will keep shapely for a very much longer period than the thin type, either on the bush or when cut. To search through Rose catalogues in quest of these varieties with good lasting qualities is not only a long and tedious task, but often ends in utter failure, growers being disappointed to find that many a so-called double Rose turns out to be far from "solid." Such searchers will, I hope, find the following list helpful and reliable. All the varieties mentioned are good garden Roses and strong growers.

Mrs. Foley Hobbs, one of the finest recently introduced Teas, bears large and perfectly formed flowers of delicate ivory white, and is very free both in growth and flowering.

Molly Sharman Crawford (T.) is in the bud a delicate eau de nil white, and pure white in the full bloom. A good upright grower with beautiful foliage.

Mayflower (H.T.) is one of the best of the newer cream Roses, the pink tints suffusing the petals giving it a charming effect.

Excellenz M. Schmidt Metzler is a grand addition to the snow white Hybrid Teas, the blooms being of wonderful size and quality.

Entente Cordiale (Pernet-Ducher, H.T.) is a lovely creamy white, tinted with carmine. It is rather small in growth, but quite hardy and remarkably free-flowering.

Wm. R. Smith is a vigorous-growing Tea of great beauty. It is creamy white, tinted with pink and violet.

Mrs. Arthur Munt (H.T.) is very similar to the foregoing, but a little deeper in colour, especially in the autumn, when it is often quite a deep peach.

Mrs. Harold Brocklebank (H.T.) is a most persistent bloomer of good upright habit. The blooms are creamy white, the outer petals tinted

salmon rose and the centre buff. One of the best garden Roses.

Alexander Hill Gray (T.) is the best of the newer yellow Teas, being most prolific and a fine grower. The rich lemon yellow flowers deepen as they expand.

Natalie Bottner (H.T.), called by some the Yellow Druschki, is, I am glad to say, much fuller than its namesake. The soft creamy blooms are very pleasing, but open badly in damp weather.

Miss Alice de Rothschild (T.) is well described as a dwarf Maréchal Niel, the deep citron yellow blooms being very similar to that old favourite Rose.

Sunburst has, since its introduction in 1912, won a great name for itself. In colour it is variable, some blooms being very light cadmium yellow, while others are deep orange yellow, either shade being very beautiful. The blooms are exceedingly long.

Frau Oberhofgartner Piecq (H.T.) is a new yellow Rose of great merit, and as an exhibition flower will be sure to make good headway, the golden yellow Hybrid Teas being hard to find.

Duchess of Normandy (H.T.) is a salmon flesh sport of Dean Hole, and as an all-round Rose should win as good a reputation as its forbear.

Mrs. Geo. Shawyer is a fine, vigorous Hybrid Tea of great value. The clear rose-coloured flowers, although very large and full, are carried on erect stems.

Margaret (H.T.) should be in every Rose-lover's garden, for the clear soft pink flowers are perfect in every way and produced in profusion. It is an ideal town Rose. [We find this mildews badly.—ED.]

Desdemona (H.T.) is a decided advance in the light pink section, the rosy opaque flowers being very large and full.

Countess of Shaftesbury (H.T.) is, I think, one of the most lovely pink Roses. The exquisitely formed silver pink blooms are invaluable for cutting, and are produced in abundance the season through.

Duchess of Westminster, a clear madder rose, sometimes attains to a remarkable size of bloom, and is a very distinct novelty.

St. Helena (H.T.), besides being of good size and form, is sweetly scented. The upright flowers are pink on a cream ground, and are very handsome.

Lady Alice Stanley (H.T.) is a grand bedding variety. The coral rose blooms are produced in clusters, but each is of large size and good shape.

Mrs. Wallace H. Rowe (H.T.) is of very novel and distinct colouring, being a peculiar mauve, but very pretty.

Jonkheer J. L. Mock (H.T.) is a finely built Rose with very high centre. The petals outside are bright cherry red, inside silvery white, and when true to colour it is most effective; but, unfortunately, it often comes very dull, and is, in fact, quite disagreeable.

G. C. Waud (H.T.) is a most brilliant Rose, a glowing orange vermillion, and its colour is very lasting.

George Dickson (H.T.) is a truly marvellous Rose. The velvety black crimson blooms are of immense size and finely built. Its only fault is that it hangs its head.

Earl of Gosford (H.T.) is in general appearance not unlike the old favourite Victor Hugo, the heavy black shadings on the crimson ground making it a very striking bloom.

Essex.

W. A. E.

NOTES ON VIBURNUMS.

THE Japanese Snowball Tree (*Viburnum plicatum*) is now flowering to perfection in many English gardens. A large bush clothed with clusters of white flowers resembling those of the Guelder Rose is indeed a wonderful sight. It is easily one of



VIBURNUM RHYTIDOPHYLLUM, A RARE HARDY SHRUB FROM CHINA. IT BELONGS TO THE GUELDER ROSE FAMILY

the six most beautiful shrubs for English gardens. There are other delightful members of this family, and of them our native Wayfaring Tree is one of the most popular. It is often seen in the wild state scattered here and there on the outskirts of the woodland or as a roadside shrub. It is common in our hedges, but none the less beautiful, and grows freely in almost any soil, especially on hillside overlying chalk.

From Central China comes the little-known *Viburnum rhytidophyllum*, destined to be a very popular wall shrub in the course of time. The creamy white flowers are borne in large heads during May. The illustration on this page shows a remarkably fine plant flowering freely on a south wall at Kew. In the same garden it has been grown in open beds, but here the result is not nearly so satisfactory.

THE BEST CONIFERS FOR LAWNS.

IN the pure air of the country, where soil and climatic conditions are alike favourable for the growth of conifers, a number of species may be included among the most useful trees for lawn specimens. They grow vigorously, form shapely plants, and the leaves of the evergreen kinds are attractive throughout the year. Ideal conditions for conifers are found in the South and West Counties of England, throughout Wales, the greater part of Scotland, and Ireland. Anywhere, in fact, where the ground is naturally moist and climatic conditions are on the moist side and the atmosphere is pure, they may be expected to succeed.

But there are places where the conditions are less favourable, and still good coniferous trees are grown, as may be seen in the drier parts of the Eastern Counties. The most unsatisfactory conditions are impure atmosphere and very heavy and chalky soils. Anyone who is intimate with the climatic conditions of such counties as Devonshire and Perthshire will recognise at once the peculiarities of climate which tend to produce the best conifers. A mature

Cedar of Lebanon is always recognised as a decided asset to a large garden, especially when the garden surrounds an ancient house; but, unfortunately, such trees have sometimes been placed in positions where they interfere with the building or are crowded by other trees. This being the case, anyone who contemplates planting such a wide-spreading tree should ascertain first that it will have sufficient room to develop to its



PRIMULA SECUNDIFLORA, A BEAUTIFUL NEW HARDY SPECIES FROM CHINA. IT HAS WINE-RED FLOWERS.

fullest extent without crowding other subjects. But planters would be well advised to select the glaucous variety of the Atlas Cedar (*Cedrus atlantica glauca*) in preference to the Lebanon Cedar, for it is a decidedly more beautiful tree, especially when young. The Deodar (*C. Deodara*), too, is a suitable tree to plant in the Southern Counties, but is generally less hardy than the other kinds.

The Incense Cedar (*Libocedrus decurrens*) is another decorative tree. Its beauty, however, centres in its stiff, columnar habit. It takes up little room, but its full beauty can only be seen when it stands quite clear of other trees. It may attain a height of 40 feet or 50 feet.

The Douglas Fir (*Pseudotsuga Douglasii*) and its glaucous-leaved form grow into majestic trees 70 feet to 80 feet or 100 feet high, furnished with branches from base to summit, in those places where suitable conditions prevail. But they must have shelter, otherwise their tops are liable to be broken. The bottom or lower slopes of a moderately deep valley often offer an ideal home. Such trees must be given ample space, for they are only seen at their best when standing quite clear of other vegetation.

The Redwood of California (*Sequoia sempervirens*) is another tree which is only seen at its best when planted in a sheltered situation with

a golden colour. For this reason it is called the Golden Larch. Another handsome deciduous conifer is found in

The Maidenhair Tree (*Ginkgo biloba*). This grows quite 70 feet high, and is easily recognised by reason of its wide, flat leaves, which bear a resemblance to a gigantic pinnule of a Maidenhair Fern.

Saxegothea conspicua is only suitable for the warmer parts of the country, but in the few places where it thrives it forms a remarkably handsome plant. Of very graceful outline, the branches are well clothed with Yew-like leaves, which are less sombre in appearance than those of the common Yew.

Cupressus lawsoniana forms a beautiful tree when placed in an open position, while many of its varieties are equally, if not more, attractive. Good ones are *glauca*, *Silver Queen*, *intertexta*, *gracilis aurea* and *lutea*. The juvenile or *plumosa* forms of *C. pisifera* are also very beautiful, *plumosa aurea* and *sulphurea* being very suitable for small gardens. The true Cupresses, such as *Cupressus sempervirens*, *C. lusitanica*, *C. macrocarpa* and other kinds, are all fine trees when at their best, but they are only suitable for the warmer counties.

Thuya plicata, or *T. gigantea* as it is often called, usually grows into a shapely specimen, although there is a tendency for the branches to

plenty of room for development. Its irregular outline fits it better for garden decoration than the more formal, conical habit of *S. gigantea*. A position for the latter tree needs selecting with considerable care. As a rule, a sheltered corner somewhat apart from the lawn is more suitable than a conspicuous position.

The Umbrella Pine of Japan (*Sciadopitys verticillata*) is well fitted for a position where space is limited, for it grows less rapidly than many other kinds and takes many years in attaining a height of 20 feet. Its deep green, flat leaves are arranged after the fashion of the ribs of an umbrella; hence the common name.

Pseudolarix Kämpferi is a rare tree with deciduous leaves. Its light green foliage is conspicuous throughout the summer, but is most attractive during the autumn, for at that period it turns to

become thin about the top. *T. orientalis*, on the other hand, forms a dense bush or tree up to 20 feet or more high. The best of the

Hemlock Spruces for general planting is *Tsuga mertensiana*. It is of vigorous habit and graceful outline, and succeeds throughout the country. *T. pattoniana* and *T. brunoniana* are also very beautiful trees, but their culture must be restricted to the warmer counties. Among the Spruces, the blue or glaucous leaved form of *Picea pungens* is one of the most beautiful. It is quite hardy, but is sometimes attacked by a leaf-casting disease. Other decorative Spruces are *P. Omorica* and *P. Morinda*.

The Firs or Abies offer many representatives. *A. amabilis* and *A. nobilis* are very showy when at their best, but they are subject to a disfiguring disease which frequently cripples them to a serious extent. *A. lowiana*, *A. concolor*, *A. brachyphylla* and *A. Pinsapo* are all decorative kinds.

Among the Pines, *Pinus Pinea*, *P. excelsa*, *P. Cembra*, *P. Coulteri* and *P. ponderosa* may be selected as a representative set. D.

VIOLA GRACILIS BLUEJACKET.

BLUEJACKET is the deep blue form of *Viola gracilis*, differing from the purple blossoms of the typical *gracilis* in a truly delightful manner. The flowers are, if anything, even smaller than *gracilis*, being identical in size and in habit of growth to the exquisite little sulphur yellow *Marjorie*, which is becoming such a favourite garden subject. The deep blue of Bluejacket contrasts exquisitely with either *Marjorie* or *Golden Fleece* (a deeper yellow form), and as it produces its flowers just as profusely, there is no reason why it should not be as freely used as the type. We use it in quantity here in the gardens at Holland House and like it immensely, and purpose raising a large stock for spring bedding as well as for further decorative effects on the slopes of the rock garden. Such floriferousness, allied with the dwarf tiny foliage and the large Violet-like blossoms, combine to make Bluejacket an ideal spring flower. It is truly perpetual; summer drought has no terrors for it, for plants burnt down to the ground-level in a dry season will come up fresh and green with the early rains and re-establish themselves in readiness for another flowering season.

PRIMULA JAPONICA SANGUINEA.

THE true sanguinea variety of *Primula japonica* seems even now to be a somewhat scarce plant in gardens. At its best it is fully equal to the grand *P. pulverulenta* for effect. It is not quite so graceful as *P. pulverulenta*, but the colouring is so rich and brilliant that it would be well if this sterling *Primula* was grown in very large quantities. Even if only a small grouping is secured for a water-side effect or for a cool spot elsewhere in the garden, *sanguinea* will prove a very attractive subject. It would be a good thing for the popularity of the best forms of *P. japonica* if all the poorer and mottled varieties and seedlings were entirely swept out of gardens, leaving a clear field for the superior selected self colours. If one could ensure that the best pink, rose, scarlet-red, and crimson shades were selected and perpetuated and all the inferior forms discarded, then *sanguinea* and the other rich forms of *japonica* would rise to a higher level in garden appreciation, and we should get more of the beautiful *Primula* colour drifts which are such an acquisition to the informal garden.

Clacton-on-Sea.

P. S. HAYWARD.

NEW AND RARE PLANTS AT THE CHELSEA SHOW.

FIRST-CLASS CERTIFICATE.

Adiantum grossum.—A handsome evergreen sub-erect species from Tropical America, which, comparatively, might be referred to *A. macrophylla*, with much more rounded pinnæ. The exhibited example was nearly two feet high, displaying vigour and freedom of growth. From Messrs. H. B. May and Sons, Edmonton.

AWARDS OF MERIT.

Platyserium Cordreyi.—By reason of the rarity of garden forms of this genus, apart from the intrinsic merit of the variety, this would appear to have deserved "first-class" rank, an honour probably yet in store. It has been evolved from *P. Alciorne*, the hoary fronds of 2 feet or more in length considerably ornamented by the deep fingered lobes at their apices. We regard it as an acquisition as well as an addition to the Fern tribe.

Pteris flabellata plumosa.—This, if not of the plumose density of some of the *Nephrolepis*es, is at least a remarkable variation, and if sporting should follow, might prove invaluable to the gardener and decorator. These came from Messrs. H. B. May and Sons, Edmonton.

Calceolaria Stewartii.—This is a golden yellow flowered variety, its outstanding features freedom of blossoming and the hall-mark of general utility. As exhibited, the plants were not more than 1 foot high, the pouches of comparatively large size. From Messrs. James Veitch and Sons, Chelsea.

Adiantum gloriosum Lemkesii.—Obviously a Farleyense form with more crested pinnæ, the mass of young fronds rising from the centre of the plant being coloured a warm reddish tone. A graceful and beautiful variety, of which a nice group was on view. Shown by Messrs. Lemkes and Sons, Alphen, Holland.

Campanula tomentosa Maud Landale.—A pretty variety of this biennial Bell-flower, the bluish erect bells appearing from the axils of woolly stems and leaves. Shown by Miss Maud Landale, Limpsfield.

Begonia Lady Carew.—A double-flowered, tuberous-rooted variety, having rose-coloured flowers in huge rosettes of 6 inches or so across. The shade of colour is very bright and effective. From Messrs. Blackmore and Langdon, Bath.

Primula secundiflora.—A remarkably beautiful novelty discovered by Mr. Forrest when collecting in China for Messrs. Bees. It was found on the Lichiang Range at an altitude of some 13,000 feet, and the photographs taken by Mr. Forrest on the spot depict a plant of considerable freedom of flowering. Botanists look upon it as identical with *P. vittata*, but it is quite distinct from the plant usually recognised as such, and vastly superior. For gardening purposes and to give our readers an idea of the plant, it might not inaptly be compared to a red-flowered *P. sikkimensis*, the colour a rich wine red. It is a moisture-loving plant. Shown by Messrs. Bees, Liverpool. See illustration on page 284.

Oxalis adenophylla.—This charming species, with many-lobed, glaucous leaves and rose-coloured flowers, was shown by Messrs. Bees, Liverpool, and Mr. G. Reuthe, Keston. It is one of the choicest of rock garden plants, meriting all care.

Pinguicula reuteriana.—A delightful novelty from the Alps of Dauphiny. The peduncles are

4 inches or so high, one-flowered, the rosy pink lined flowers pretty in the extreme. From Mr. G. Reuthe, Keston, Kent.

Carnation Scarlet Carola.—This is a counterpart of the original crimson variety in all save colour, which is self-descriptive. It is a bold and striking variety. From Mr. C. Engelmann, Saffron Walden.

Iris Gold Crest (*I. pallida* × *I. Cengialti*).—The greater leaning of the variety is towards the first-named parent, the flowers somewhat modified in size and more compactly built. The colour, a bright, lustrous violet blue, is very fine; the gold beard or crest, which justifies to some extent the name, very pronounced. Raised and exhibited by Mr. W. Rickarton Dykes, Charterhouse, Godalming. See illustration below.

Clematis Empress of India.—A very beautiful addition to the race. The handsome flowers are coloured a rosy mauve with lilac shading. Doubtless in the open the richer colour would be enhanced. From Messrs. George Jackman and Sons, Woking.

Telopea speciosissima (Waratah).—A handsome inflorescence of this rarely seen Australian shrub was shown by the Rev. A. T. Boscawen, Ludgvan Rectory, Long Rock, Cornwall. The flowers, arranged in a dense, conical head, are tubular and coloured a reddish scarlet, the crenated leaves not unlike those of *Ardisia crenulata*, but longer and even more coriaceous and shining. Its flowering in this country is somewhat rare. A cultural commendation was also awarded to the exhibitor.

Pittosporum Mayi Silver Queen was exhibited by the Donard Nursery Company, Newcastle, County Down. It is a pretty variety, with silvery variegated foliage shown to advantage against the almost black, wiry stems.

NEW ORCHIDS.

First-Class Certificates.—*Miltonia The Barons* and *Miltonia J. Gurney Fowler*, both shown by Messrs. Armstrong and Brown, Tunbridge Wells; *Odontoglossum Queen Alexandrina*, from Messrs.

Charlesworth and Co., Hayward's Heath; *Miltonia vexillaria Solum* and *Miltonia vexillaria Lælia Sander*, both shown by Messrs. Sander and Sons, St. Albans; *Lælio-Cattleya Medina Excelsior*, exhibited by Messrs. Flory and Black, Slough; *Lælio-Cattleya haroldiana Bronze King*, from Messrs. S. Low and Co., Enfield; *Miltonia Princess Victoria Alexandra*, from M. C. Vuylsteke, Ghent; and *Odontioda Bradshawia Perfection*, shown by Messrs. J. and A. McBean, Cooksbridge.

Awards of Merit.—*Brasso-Cattleya shilliana* and *Odontoglossum Chanticleer*, from Messrs. Armstrong and Brown, Tunbridge Wells; *Lælio-Cattleya Fascinator Mossia Purity*, *Odontoglossum Dusky Monarch* and *Lælio-Cattleya Sunstar*, shown by Messrs. Charlesworth and Co., Hayward's Heath; *Odontonia Roger Sander* and *Cattleya Magali Sander*, exhibited by Messrs. Sander and Sons, St. Albans; *Cymbidium Venus*, from Messrs. Stuart Low and Co., Enfield; and *Miltonia Adonis* and *Odontioda Prince de Galles*, shown by M. C. Vuylsteke, Ghent.



IRIS GOLD CREST, A CHARMING NEW HYBRID SHOWN BY MR. W. R. DYKES.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Late Peach Trees.—The fruits on these trees require their final thinning. Select the fruits which are best placed with regard to sun, and remove some of the leaves from those which it may be necessary to leave under the wires. The aim of the cultivator should be to leave the fruits evenly distributed over the tree and as many of them on the upper side of the tree as possible, and due regard must be paid to the nature and condition of each tree in deciding how many fruits they are to carry.

The Orchard-House.—Apple and Pear trees in pots require careful attention. The pots have now become well filled with roots, and consequently more water and stimulants will be necessary. Examine them several times daily, and give sufficient water when necessary to thoroughly soak the ball of soil. As soon as the crop is sufficiently advanced, a careful thinning of the fruits should take place, removing all deformed and worthless fruits first.

Plants Under Glass.

Pot Roses.—Most of the plants will have finished flowering, and should be removed to their summer quarters, where the pots may be half plunged in ashes at a sufficient distance apart to permit sun and air to pass freely among them. It often happens that these plants are neglected after the flowering period is over, and consequently the flowers are of an inferior quality the following season. Give frequent waterings with liquid manure, and keep a sharp look-out for aphid and mildew, which must be checked as soon as possible. The buds should be removed from all shy-growing plants, in order to build them up and prepare them for next season's forcing.

Calceolarias.—These are valuable plants for the conservatory, and to have them in flower early it is necessary to sow the seeds about this date. Sow in well-drained pans of fine soil and cover the seeds very lightly. Cover the pans with sheets of glass and place them in a close, cool pit. When the young plants are through the surface, they must be placed quite near the roof glass, but never be exposed to the full glare of the sun. Pot as soon as large enough, and never allow them to become pot-bound until they are placed in their flowering pots.

Humea elegans.—Now is a good time to sow seeds of this beautiful plant for the decoration of the conservatory or flower garden the following season. Sow in light, sandy soil and protect from sun.

The Flower Garden.

Sweet Peas.—The latest batch of plants which have been raised in pots should be planted out as soon as possible in ground which has been thoroughly prepared for them, and a sowing may be made in the open garden to produce blooms in the autumn. The early batch of plants will benefit by mulching with decayed manure.

Mignonette.—A good sowing should be made now to produce blooms in August and September. Sow in a cool position and make the soil moderately firm. When the plants are large enough to handle, they should be freely thinned, and they must never be allowed to suffer from want of moisture at the roots.

Climbing Plants.—Attend to the requirements of all climbing plants at regular intervals, keeping them well thinned out so that those which remain may be trained in a free and natural manner. Clematises and Loniceras are among the first to become entangled, and, unless they are kept well within bounds, they will soon be ruined for the season. Climbing Roses must also be kept well thinned out, and the shoots from the base of the plants secured in such a manner that they will not be broken by rough wind. Insect pests should be carefully watched for and destroyed as soon as possible. If dry weather prevails, a mulching of farmyard manure ought to be placed over the roots to prevent evaporation.

The Hardy Fruit Garden.

Cherry Trees.—Most of the trees have set a good crop this season, and in many cases the fruits

will require thinning if the finest quality is desired; but this should be carefully performed, and not too freely until the fruits begin to swell. Keep a sharp look-out for black fly, which is often troublesome, especially during cold weather. Maggots are also troublesome, and must be destroyed as soon as noticed. Do not allow the foliage to become overcrowded for want of disbudding. A good mulching of decayed manure may be given to trees which are exposed to the sun. As soon as the fruits begin to colour, protection from birds must be provided.

Early Strawberries.—The earliest plants growing on sheltered borders are now swelling their fruit, and they will benefit by a watering of weak liquid manure, which should be carefully applied to the roots without coming in contact with the fruit or foliage. If good specimens are desired, a careful thinning of the fruits must be done. Protect the crop from birds as soon as colouring commences.

The Kitchen Garden.

Peas.—To produce Peas throughout the autumn, weekly sowings should be made from this date to the middle of June, and, if possible, the ground for these sowings should have been trenched and manured for the purpose. Deep cultivation is the best means of avoiding mildew, which often proves troublesome during the autumn. The Pea is a gross-feeding plant, and should receive a liberal supply of moisture at the roots through August and September. The space between the rows should be mulched with farmyard manure. Distinction, Autocrat and Rearguard are good varieties for this purpose, and seldom suffer from the attacks of mildew. Midseason Peas should be staked as soon as the plants are a few inches high. Water and mulch freely if the weather is dry.

Early Carrots.—Let these be thinned as soon as possible, and keep the hoe at work between the rows. Sow again for use during the autumn. The latest batch intended to furnish supplies through the winter and spring may be sown about the middle of June. At Frogmore our largest sowing is made in June, and these roots generally escape the Carrot fly or maggot.

Vegetable Marrows may now be planted in the open and protected from frost or rough wind. Plants in pits should be kept well thinned out and watered freely with liquid manure.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Lettuce.—From this date sowings had better be made where the plants are to remain, as planting out the thinnings in hot weather entails a good deal of work in keeping them supplied with water. Care should be taken to sow thinly, and when the young plants are about three inches high, thin out to at least 9 inches apart. This will apply more particularly to the Cabbage sorts.

Peas.—In cold districts it will be advisable in sowing Peas from now till the middle of June to sow some of the earlier sorts. These late sowings are sometimes not very satisfactory, as they suffer from mildew, so that it will be necessary to give them a little extra care and attention. Select a piece of ground that is partially shaded from the direct rays of the sun, and see that they do not suffer from drought.

Carrots.—Maincrop Carrots will now require thinning, and, as advised for the earlier sorts, this work should be done in showery weather. Where wireworms and the Carrot maggot are troublesome, put some mowings from the lawn between the rows, and repeat this from time to time until all danger is past.

Kidney Beans.—The main crop should now be sown, and as this is naturally the most important, a good position should be selected. One of the great evils in the cultivation of this crop is overcrowding, and there is no occasion for it, as better crops are secured when the plants are allowed plenty of room. They should be given at least 2 feet between the rows, and thinned out to from 9 inches to a foot between the plants. Plants that have been brought on under glass may now safely be planted out.

The Flower Garden.

Sweet Williams.—There has been such a wonderful improvement of late years in the strains of these old-fashioned flowers that it is more than likely their popularity will be increased. Some of the self colours, such as Pink Beauty and Sutton's Scarlet, are particularly fine, and well adapted for planting in masses where colour effects are wanted.

Thinning Hardy Annuals.—Those that were sown last month should now be ready for thinning. It is of the utmost importance that they be thinned early and severely. If this is done, not only will the blooms be larger and finer, but they will last twice as long as those allowed to be crowded together.

Plants Under Glass.

Cyclamen.—Young plants from seed sown in August will now be ready for a shift into 4½-inch pots. Pot moderately firm in a compost of loam, leaf-soil and sand, with a sprinkling of bone-meal, and in doing so care should be taken not to damage any of the foliage. For a time after potting keep the plants shaded, and spray them over several times on fine days, as it is important that the foliage should always be moist. By the end of June they may be safely transferred to frames, keeping them well up to the glass, and by all means see that they are not subjected to draughts.

Perpetual-Flowering Carnations.—The plants rooted towards the end of last year will now be ready for potting into their flowering pots. For this potting use a good rich compost, in which only a small quantity of leaf-soil has been added, and pot rather firmly. After this potting place them in a cool house, and for a time very little water should be required; indeed, for a day or two a slight spraying with the syringe should suffice.

Indian Azaleas.—These will now have completed their growth and should be moved into cooler quarters. They must not, however, be placed out of doors at this time; indeed, if a convenient light structure is available, where they will get plenty of light and air, they had better not be put out at all.

Sowing Primulas.—The seed should only just be covered with fine soil or sand. Place the seed-pan in a moderate temperature and shade from the sun. Be careful to prick out the seedlings as soon as they can be handled, and put them back into heat until they are large enough to pot on.

Cinerarias.—Where the plants are not expected to be in bloom before March, the seed need not be sown before this date. Unlike Primulas, they resent a high temperature. Stand the seed-pan in a cold frame, and, if not exposed to the sun, it will not be necessary to shade them in any way.

The Hardy Fruit Garden.

Apples.—The fruits on the most forward of the young trees will now be sufficiently advanced so that they may be gone over and judiciously thinned. It is a great mistake to allow large clusters of fruit to remain on the trees, which will more than likely never make good specimens. It is far better to have a few good fruits than a score of indifferent ones that in the end will not be fit even for cooking. If time will permit, these young bearing trees will be greatly benefited by an occasional watering with liquid manure.

Fruits Under Glass.

Vines in Early Houses.—When the berries have finished colouring, the temperature should be reduced; indeed, fire-heat should only be used on dull days. Vines in succession houses will be coming on rapidly, and the houses should be closed down early in the afternoon to get the benefit of as much fire-heat as possible. On fine evenings the top ventilators should be opened slightly for a short time to clear excessive moisture.

Melons.—As the fruit is approaching the ripening stage, only sufficient water should be given to keep the plants from flagging. Air should be admitted top and bottom; this will add materially to the flavour of the fruit. Melons should be kept at least four days after being cut before being sent to the table.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

INFORMAL FEATURES IN A GARDEN SCHEME.

SO wide is the geographical distribution of the exotic plants with which gardens are adorned at present that it is not surprising the old attitude of arranging them in stereotyped borders, if not wholly surrendered, has been at least modified to such degree that for these wildings of other lands a freer arrangement, both in garden design and in the system of grouping them, is being generally adopted. To this influence much of the present character of informal gardening is due. It seeks, beyond all things, to illustrate plant-life in its highest possible development, grouping them under conditions that approximate to those in Nature; and creates a sense of individuality in the garden scheme, investing it with a charm that would otherwise be non-existent. It is idle to suggest that a heterogeneous collection of plants indigenous to widely different localities can be accommodated under border conditions with the hope of permanent success; while apart from this consideration is the fact that a garden gains in interest and effect when the transition from one part to another is gradual and discloses by its occupants or arrangement that different conditions are illustrated.

Reasons such as these give distinction to rock, bog, water and other special gardens to which distinctive names have been given, indicating the prevalent type of plant-life for whose well-being they have been created. The principle underlying this idea is apparent, as, in the first instance, alpine and hill-loving plants are mentally associated with elevated ground and rock, and in reproducing these under artificial conditions we emphasise the most prominent features, choosing a more or less elevated position partly on account of the greater available light, and because such a position accentuates the apparent height. One may contend that the use of rock is only a fanciful idea, gaining its importance chiefly from the effect it produces; but its mechanical action in draining and conserving moisture in the soil is of far greater moment. Its pictorial aspect is only worthy of attention when it is carefully held subservient to, and gives forceful expression to, the living plants with which it is adorned. Some criticism of an adverse character is at times directed to the fact that in numerous instances rock gardens are accompanied by an accessory background in the form of trees or shrubs; but as these are salient features in any English landscape, it does not appear feasible to eliminate them. The additional element of truth that would accrue scarcely compensates for their loss, and when the taller arborescent growth does not encroach upon or overshadow the rock garden, its double function as shelter and background is always an asset of great practical value.

The transition from rock to water garden is rendered most natural by interpolating the bog garden between. Its drier portion, encountered directly on leaving the rock garden, will foster growth native to the open uplands and heath. By gradual descent moister conditions will unfold themselves, until quite sodden ground will occur in close proximity to, and at times be carried directly from, the margins of an open expanse of water, while natural conditions approximating to those indicated foster the widest range of exotic plant-life at no great expense beyond the initial cost. In their absence much may be done by

artificial means to render such a scheme feasible, either on a large or a small scale. One of the best agents for forming an impervious lining over porous soil is well-puddled clay, a material that is generally easy to procure and at no great expense. For open water, the ground after excavating should have the sides and bottom lined with clay to a depth of 6 inches to 9 inches, while ground intended for bog-beds should have a thickness of 4 inches to 6 inches puddled over the bottom and sides, care being exercised that the clay is not allowed to dry and shrink before the water and soil are given their respective positions.

Were the ground not too restricted, a happy expression would be to wed the water scheme on its northern limits to the woodland, and if some portions of the latter were partly cleared of the forest growth and the ground cleaned and manured, introducing wide belts of Primrose, Polyanthus, Forget-me-not, Doronicum, Arabis, Aubrietia, Iris, Lupine and Foxglove, with Tulips, Daffodils, Scillas, Muscaris, Snowdrops, Aconites, Ornithogalums, Camassias and allied subjects, a feature of unusual beauty and of perennial interest would be incorporated in the garden scheme. One would naturally be tempted to link this part up with the other garden features by introducing informal groups of wild Roses of this and other lands, and any of their numerous progeny that are free in growth and effective in flower. It would be easy to name Roses that would look natural if skirting the northern extremes of the bog ground, while sympathy with the rock garden would be expressed in *Rosa nitida*, *R. lucida*, *R. pyrenaica* and the prostrate-growing *wichuraiana* type. Gradually, as the rock garden passed from view and the more formal lines of terrace, parterre or mansion disclose themselves, a more orderly arrangement will prevail; and the transition from the informal or natural garden to that which is strictly formal is nowhere easier or more pleasantly united than by the aid of Roses alone.

Coombe Court Gardens.

THOMAS SMITH.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely

packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

TULIP BULBS FOR INSPECTION (H. L.).—The bulbs are perfectly healthy, but the plants have suffered from some check while they were growing. Probably they became too dry or were suddenly exposed to a different temperature from that to which they had become accustomed.

"FIRE" IN TULIPS (C. Q.).—The Tulips are badly attacked by the disease called "fire." This disease is usually very prevalent when the Tulips are exposed to cold winds or frosts during the growing period, and is also likely to be carried over from one year to the next by means of the resting bodies which the fungus *Sclerotinia parasitica*, to which it is due, produces. These resting bodies may be present either in the soil or in the bulbs just between the bulb scales or about the neck of the bulb. We find that protecting the young growths of the Tulip is a great aid in warding off the disease.

TREES AND SHRUBS.

SHRUB TO NAME AND TREATMENT (Mrs. A. T.).—The specimen sent for determination is the Bladder Nut (*Staphylea pinnata*), a native of Southern Europe. The red-berried Elder to which you refer is *Sambucus racemosa*, a shrub common throughout the Northern Hemisphere and plentiful in some parts of Switzerland.

PRUNING DOUBLE-FLOWERED GORSE (E. B. G.).—The double-flowered Gorse may be kept away by cutting it back as soon as the flowers are over. If it is kept pruned from the time it is 1½ feet high, there will be no need to cut it hard; but if it is allowed to become leggy, it will then need to be cut back into the hard wood. Although it usually breaks well from old wood, such is not always the case, and it is as well to avoid too severe pruning whenever it is possible.

TREATMENT FOR LILACS (H. M.).—Providing your Lilacs are healthy, you may cut them back safely in the manner you describe. The work should be done as soon as the flowers fade. Do not allow suckers to grow from the rootstock, however, for they will weaken the main branches. It is also advisable to keep the centres of the plants free from very weak shoots. An occasional application of liquid cow-manure may be given with beneficial results during the period of growth, and a surface-dressing of well-decayed manure above the roots will assist in the promotion of new growth.

THE GREENHOUSE.

ABOUT AN ASPIDISTRA (M. P. H.).—Either (1) the plant is in a draught, (2) the leaf sent is fading from old age, or (3) the soil is becoming poor. Try watering with a solution of sulphate of ammonia. As much as will cover a sixpence dissolved in a gallon of water may be used once a week.

FRUIT GARDEN.

RED CURRANT LEAVES (D. M. H.).—The Currant bush appears to be attacked by aphids, and should be sprayed with Quassia and soft soap.

MELON PLANT FOR INSPECTION (C. L. S.).—The browning of the Melon stem does not appear to be due to any insect or fungus attack, but looks more like burning or scorching.

INJURY TO RASPBERRIES (H. B. J.).—Your Raspberries are badly attacked by the Raspberry cane moth (*Lampronia rubiella*), the caterpillar of which bores into the young shoots and destroys them. If you cut away and burn the affected shoots now, you could do much towards destroying the pest outright.

MISCELLANEOUS.

THE LESSER STITCHWORT (C. P.).—The Lesser Stitchwort is *Stellaria graminea*, the two names being used together in Syme's "English Botany." It can be distinguished from the Greater Stitchwort by its narrower leaves and smaller flowers. The two can be easily separated. Both are quite common.

SWEET PEA LEAVES FOR INSPECTION (F. R.).—The yellowness of the leaves is a symptom of some mal-nutrition, but the material is insufficient to enable us to say what the precise cause of the trouble is, or whether it is in any way connected with streak (which we greatly doubt). Cold winds sometimes bring about an appearance such as the leaves show.

WATER AND CEMENT TANK (C. T.).—We have not experienced anything of a detrimental character resulting from the use of water from a newly made cement tank, and have known of several instances of Water Lilies being planted before the first water was run off. If, however, you fear to use the first water, let it stand for a few days and then let it run off. The differences between *Cheiranthus* and *Erysimum* are very small, and rest chiefly in the form taken by the cotyledons or seed leaves. In *Cheiranthus* they are usually accumbent and in *Erysimum* they are incumbent. Botanists are not agreed upon the point that the two genera should be kept distinct.

VARIOUS QUESTIONS (F. W. L. F.).—Before giving advice on the stopping of *Chrysanthemum* plants for the production of exhibition blooms, we should require to know which varieties you are growing. Usually, the natural break—which occurs on the majority of varieties

from the beginning of May to the end of June—gives the most desirable results. Naturally late-flowering sorts should have been stopped before this date. Plants intended to bear more flowers of smaller size for cutting should be stopped in April and again early in June. Yes; plant *Oxalis cernua* in the autumn. The name of the flower sent is *Clivia miniata*.

NAMES OF PLANTS.—*Zelie*.—*Paulownia imperialis*.—*C. H. F.*.—*Pyrus Torminalis* (the Wild Service Tree).—*Miss M. G. H.*.—*Raphiolepis ovata*.—*G. B.*, *Lympstone*.—*Ceanothus dentatus*. The plant described is a very fine specimen.—*J. D.*.—*Pyrus Aria* (White Beam).—*J. F.*, *County Durham*.—*Prunus Padus* (the Bird Cherry). It will grow freely in ordinary garden soil.—*H. C. C.*, *Limerick*.—*Rhododendron formosum*. Hardy in South-West Ireland.—*Black Hambro*.—*Lonicera tartarica*.—*Mrs. Sartorius*.—1, *Pyrus pinnatifida*; 2, *Cytisus monspessulanus*.—*C. P.*, *Bournemouth*.—1, *Pseudotsuga Douglasii*; 2, *Syringa vulgaris* variety. The other two specimens were too much withered to identify. Both specimens in the second batch are of the Douglas Fir (*Pseudotsuga Douglasii*), though one is apparently from a tree in poor health.—*A. G. G.*.—1, *Crassula* species; 2, *Cuphea miniata*; 3, *Ruellia Portellæ*; 4, *Primula malacoides*; 5, *Chlorophytum elatum variegatum*. The Peach is affected by mildew, due to bad ventilation. Try flowers of sulphur or a solution of potassium sulphide.—*C. H.*, *Worthing*.—1, *Asphodeline lutea*; 2, *Asphodelus albus*; 3, *Camassia esculenta* variety.—*Miss Lloyd*.—*Saxifraga Sibthorpii*.—*H. B.*.—1, 2 and 3, garden seedlings of *Phlox subulata*; 4 and 5, the Irises were beyond recognition; 6, *Fuchsia fulgens*.—*H. A. C.*.—Garden varieties of *Azalea* which have no distinctive names.—*J. M.*.—1, *Crassula lycopodioides*; 2, *Tolmiea Menziesii*; 3, *Pyrus Torminalis*; 4, *P. Aria* variety; 5, *P. intermedia*.

ORCHIDS AT THE CHELSEA SHOW.

THERE were thirteen groups of Orchids, an unlucky number truly, for the magnificent collection of Sir George Holford, which has so often formed a flower show in itself, went unrepresented. The groups stretched the whole length of the north and south sides of the Large Tent. Amateurs were represented by the Duke of Marlborough, Sir Jeremiah Colman and Mr. James Horlick. We saw no epoch-making flower, though there were the usual large number of novelties. The feature of the Orchids was their extremely high general level, and we have no hesitation in saying they have never been bettered at any of the earlier shows.

Messrs. Charlesworth and Co., Hayward's Heath, led off the groups on the northern side of the tent with a design as pleasing in the sustained balance of colour from end to end as in the rich variety and fine culture of the varieties included. The centre-piece was a mass of *Odontiodas* in shades of scarlet, overhung with three white sprays of *Odontoglossum armainvilliers xanthotes*. Two immense pans of *Cattleya Skinneri* on either hand, with their clear shade of purple rose, clashed a little perhaps with the scarlet, but led to lovely masses of *Cattleya* hybrids and *Miltonias* in some particularly good varieties. Hybrid *Odontoglossums* occupied the wings, and these, with intermediate banks of *Lælio-Cattleya Fascinator* on one side and *Lælio-Cattleya Aphrodite* on the other, were linked together at the back by an arrangement of *Miltonias* and *Cattleyas*. This scheme was novel, but impressed us as being a little too flat. The way in which the yellow of *Lælio-Cattleya Euripides* and other hybrids at the base linked up the yellow of the *Oncidiums* overhanging the banks of *Cattleyas* was, however, very pleasing. The group was full of good things. The soft shades of *Thunia Veitchii*, the fine-flowered specimen of *Calanthe veratrifolia*, and such *Odontiodas* as *Charlesworthii*, *Diana*, *Bradshawia* and *Joan* were a few that caught the eye at once.

The Duke of Marlborough, Blenheim (gardener, Mr. G. Hunter), had an interesting collection, but the group lacked a connecting thread which, by connecting allied plants and related colours more closely, would have often added beauty by leading the eye to special points. *Dendrobiums*

nobile virginale and *Deareii* were well flowered, *Cattleya Undine* was another pretty piece of white, and *Brasso-Cattleyas Impératrice de Russie* and *Maronia* were fine plants.

Messrs. J. Cypher and Sons, Cheltenham, had a novel arrangement built up in a square plot from the ground. The four corners were capped with nice plants of *Cocos weddelliana*, while linking two sides was an arch carrying some fine plants of *Dendrobium wardianum*. Under this arch one got the prettiest effects, *Renantheras*, *Cattleyas*, *Epidendrums* and many fine forms of *Lælio* and *Brasso Cattleyas* glinting through films of greenery. There was a lovely piece of Temple's variety of *Cattleya Skinneri*, and *Lælio-Cattleya hyeana* was very fine; but did not those broad-leaved, warm-coloured *Crotons* seem rather too heavy for the delicate white sprays of *Phalænopsis* next them?

Messrs. Sander and Sons, St. Albans, staged a collection on the north tabling which in arrangement and fine quality at once impressed one as one of the perfect things of the show. Twenty-four magnificent *Brasso-Cattleyas* and *Brasso-Lælio-Cattleyas* formed the face of a central trophy, of which the sides showed *Miltonias* in many soft shades. *Trichoplias suavis* and *Hennisii* formed a base, which in a trailing line was continued right and left to the ends of the group. *Phalænopsis* and *Renanthera* were an outstanding combination repeated on each side, and there were grand terminals of *Cattleyas* and *Odontoglossums*. From so many good things it was difficult to select just those few we have space to mention. *Miltonia vexillaria* G. D. Owen, darkly blotched, must be one of them. The white *Cattleyas Mossia* *Wagneri* and *Magali Sander* were very fine indeed. Others were *Cypripedium rothschildianum* The King, *Odontoglossum ardentissimum verulamium*, *Odontioda Roger Sander* and *Miltonia Dreadnought*.

Messrs. Armstrong and Brown, Tunbridge Wells, ended the tabling at the north end of the tent. Here was a regal collection of species and hybrids, regal in name and culture alike, containing such novelties as *Odontioda Coronation*, *Odontoglossum Queen Mary*, *Brasso-Lælio-Cattleya Prince of Wales*, and the old *Dendrobium thrysiflorum* carrying twenty flower-spikes. There was a grand plant of *Cœlogyne pandurata*. *Cymbidium Pauwelsii* was fine. A lovely effect was produced by the slender sprays of *Odontoglossum thompsonianum* leaning through a broad bank of pure white *Phalænopsis*. The real feature of the group, however, was its rich *Brasso* and *Lælio Cattleyas*, which repaid a long examination.

James Horlick, Esq., West Dean Park, Chichester (gardener, Mr. W. H. Smith), sent one of those groups interesting in themselves, and doubly interesting because they were unique. Under a background of Palms was a wonderfully flowered batch of *Vanda teres* arranged in the shape of a crescent on the ground. We really thought them too full of flower, and wished they could have been spread out to cover twice the space. The crescent enclosed a centre-piece of *Calla Pentlandii*, the species with deep green, unmottled leaves and very large, rich golden yellow spathes, which are touched with crimson at the base. Bamboos, *Grevilleas* and Maidenhair Ferns lightened the whole group. An admirable collection.

Messrs. Mansell and Hatcher, Limited, Rawdon, Leeds, were at the south end of the tent, and their group maintained that high standard of artistic staging which they were among the very first to introduce. A bold centre-piece of glistening white *Phalænopsis* was surrounded at a lower level with a belt of the deep red of *Renanthera imschootiana*.

Right in the centre was a glowing carmine piece of *Odontioda Chanticleer*. At either end were masses of *Cattleya Mossia* in many forms, cut off from the centre by recessed batches of *Odontoglossum* hybrids. *Odontoglossum amabile Royal Gem*, *Lælio-Cattleya Eudora* and the yellow of *Odontoglossum crispo-harryanum* were a few of the specially good things.

Messrs. J. and A. McBean, Cooksbridge, showed a batch, in which we found more pleasure in examining individual plants than in admiring the colour scheme as a whole. The arrangement was too "spotty" with the irregular dotting of the *Odontiodas* along the whole frontage. But who cares? Here were *Cattleya Mossia* with twenty-eight flowers, *Oncidioda Cooksonæ* with forty-nine flowers, and grand plants of *Oncidium mcbeanianum* (a new *macranthus* hybrid), *Lælio-Cattleya Helius* (a shade of salmon), *Odontoglossum armainvilliers alba*, *Lælio-Cattleya Anak*, *L.-C. Ganymede* (with yellow wings), *L.-C. callistoglossa ignescens* and, best of all, *Odontioda Perfection*, with flowers of *Chanticleer* colour and *Charlesworthii* size.

Sir Jeremiah Colman, Gatton Park, Reigate (gardener, Mr. J. Collier), sent a beautiful group, of which the first thing to tell was that all the *Odontiodas* (and the group was dominated by them) were Gatton seedlings. One plant carried over two hundred flowers on three spikes, and another over one hundred and seventy. Lady Colman has given her name to specially lovely forms of *O. Bradshawia* and *O. Vuylstekeæ*. Two striking terminals to the group were *Cœlogyne dayana*, the Necklace Orchid, and *Dendrobium acuminatum*, a unique plant which carried five spikes, each with ten to twelve flowers. *Phalænopsis*, *Miltonias* and *Odontoglossums* gave relieving touches of soft colour, and there were many more good Gatton seedlings, but the general scheme of the group was its profuse masses of scarlet *Odontiodas* sprayed out from the slender greenery of *Asparagus albanensis*.

Mr. Harry Dixon, Spencer Park Nursery, Wandsworth Common, had a number of interesting plants. There were several nice forms of *Cattleya Mossia*. *Lælio-Cattleya canhamiana* × *Mendelii* and *Lælio-Cattleya Mendelii* May Queen were both good.

Messrs. Stuart Low and Co., Bush Hill Park, had the largest display on the south side of the tent. The centre-piece was an outstanding trophy of *Phalænopsis*, contrasted with *Odontiodas* and *Renantheras*. The two extremities were solid effective clumps of *Renantheras*, while between were masses of *Cattleyas*, *Lælias* and hybrids broken by little groups of rarities and curiosities. There were *Cyrtopodium punctatissimum*, with curious mottled yellow flowers, overtopped by its enormous horn-like pseudo-bulbs; *Cyrtopodium andersonianum*, with tall spikes of clear yellow; the delightful little blue *Vanda* (*V. cærulescens*), the Bull's-head *Vanda* (*V. cristata*) and strange *Saccolobiums*. The race of yellow *Lælia flava* × *tenebrosa* seedlings also deserved special notice.

Messrs. Flory and Black, Slough, staged a small group in which *Cattleyas*, *Odontoglossums*, *Lælio-Cattleyas* and *Odontiodas* were represented; likewise a pretty mass of the orange *Lælio-Cattleya* G. S. Ball, surrounded by the white of *Phalænopsis*.

Mr. C. F. Waters, Balcombe, Sussex, had a central mass of *Cattleyas* with batches of *Miltonias* on either hand, and the whole was overhung with white *Odontoglossums*. It was a pretty bank of colour, but as one stood back one had a feeling that the arrangement was too flat.

THE GARDEN.

No. 2220.—VOL. LXXVIII.

JUNE 6, 1914.

NOTES OF THE WEEK.

Severe Frosts in May.—In many parts of the country severe frosts were experienced during the nights of the 25th and 26th ult. Mr. Harriss informs us that at Lockinge 8° and 9° respectively were registered on those dates. A great deal of damage has been caused in many places, especially to early Potatoes, French Beans and Roses.

Newly Planted Trees and Shrubs.—Trees and shrubs that were planted last autumn or in the spring should have plenty of water given to them now, for it is just at this time that such plants suffer. Evergreens will greatly benefit by an occasional syringing overhead.

Primula La Lorraine.—This new hybrid, raised by Messrs. Lemoine et Fils of Nancy, promises to be a good garden or cool-house plant. It is a hybrid between *P. Sieboldii* and *P. Veitchii*, and partakes of the characters of both its parents. The flowers are pleasing in colour, and the habit of the plant quite good.

Megaseas as Foliage Plants.—Broad-spreading forms of *Megasea* (*Saxifraga*), with the rich and varied colours of their large leaves, are worth growing for their foliage alone, as when once established they are attractive at all seasons, whether it be on the higher parts of the rock garden, in the wilder parts of the grounds, or by the side of streams, and at the present time are among the most effective of foliage plants.

Planting Annuals.—This work should be finished with as little delay as possible. A showery day ought to be chosen for the purpose, but failing this, the soil should be thoroughly moistened a day previous to planting. Large quantities of the various kinds for cutting can be planted on good, rich soil, so that during the season those plants which are placed in the pleasure grounds may be left uncut.

A Handsome Fumitory.—In *Corydalis nobilis* we have a distinct and extremely attractive plant, and, without doubt, the most desirable of the whole genus. It is of robust habit and perfectly hardy, always yielding an abundance of flowers at this season of the year. They are of a rich golden yellow with chocolate spots on the lip, and are borne on strong stems, leafy to the top, and rarely exceeding 1 foot in height. These rise from a mass of bright green, Fern-like foliage. It is an excellent plant for a damp spot in the rockery,

although it may be planted along the border with equal effect, and can be readily increased by division or raised from seed.

Sowing Mignonette.—Seed may be sown in good rich soil, and a sharp look-out kept for slugs, which are very fond of this plant while in a young state. Soot may be freely sprinkled about the plants to keep slugs in check, and will also prove a valuable stimulant to the plants throughout the season. Several sowings may be

ment can be effected in one season. The grass, of course, will take on a slightly brown tinge, but it soon recovers and comes stronger than ever.

The Bridal Wreath (*Francoa ramosa*).—Plants that are throwing up plenty of flower-spikes should be supported by neat sticks; place them in a cool pit and protect from strong sun. Seeds of this plant may be sown now to produce plants for next season. Sow in pans of fine, sifted soil and cover with sheets of glass. Pot on as soon

as ready, and grow the plants in a well-ventilated pit on a bed of ashes. Protect from sun and never allow them to suffer from want of moisture at the roots.

Cucumbers in Unheated Pits.—Hot-beds may now be made up either in brick pits or in the frame ground, where wood frames may be used. The material should be thoroughly prepared before the bed is made up, and this ought to be trodden tightly together before the box frame is placed in position. The soil should be allowed to become thoroughly warm before the plants are put out, and some covering must be applied at night.

Vases and Boxes.—In the making up of these useful adjuncts to the flower garden it must be remembered that as their season is so very short and the space limited, none but good established plants should be used. Many fine effects can be had by making use of good-sized plants of some of the hardier varieties of Fuchsias as a centre plant, while the rest of the vase or basket could be filled with smaller-growing plants, such as Ivy-leaved Pelargoniums.

Horticulture at the Panama-Pacific Exposition.—Horticulture, we are told, is to be well represented at the Panama-Pacific International Exposition, to be opened at San Francisco on February 20, 1915. A valuable cup is to be offered for the best new seedling Rose that is shown, and many attractions are promised. One of these is a wonderful new Rhubarb,



ANDROSACE PRIMULOIDES AND OTHER CHOICE ALPINES ON A DRY WALL IN A DEVONSHIRE GARDEN. (See next page.)

made from now until the end of June on rich soil which has been made firm by treading.

To Eradicate Daisies on Lawns.—Where Daisies are present to any extent they very soon crowd out the finer grasses, and means should be taken to at least check them. For this purpose there is nothing better than finely powdered sulphate of ammonia applied in dry weather at the rate of 1oz. to every square yard. This must be repeated from time to time, and if this is persisted in, it is really surprising what an improve-

ment we are informed, is "extraordinary for its exceptional length of stem, which is 2 feet to 3 feet long." No doubt many of our readers will journey to San Francisco purposely to see such wonderful Rhubarb—unless, as is quite likely, they happen to have some with longer stems at home. A new Sweet Pea, which is not an annual, but a perennial, is to be another feature. The flowers of this, we are solemnly told, will "no more fade than will the green of living Ivy," and blooms will remain fresh till the end of the year.

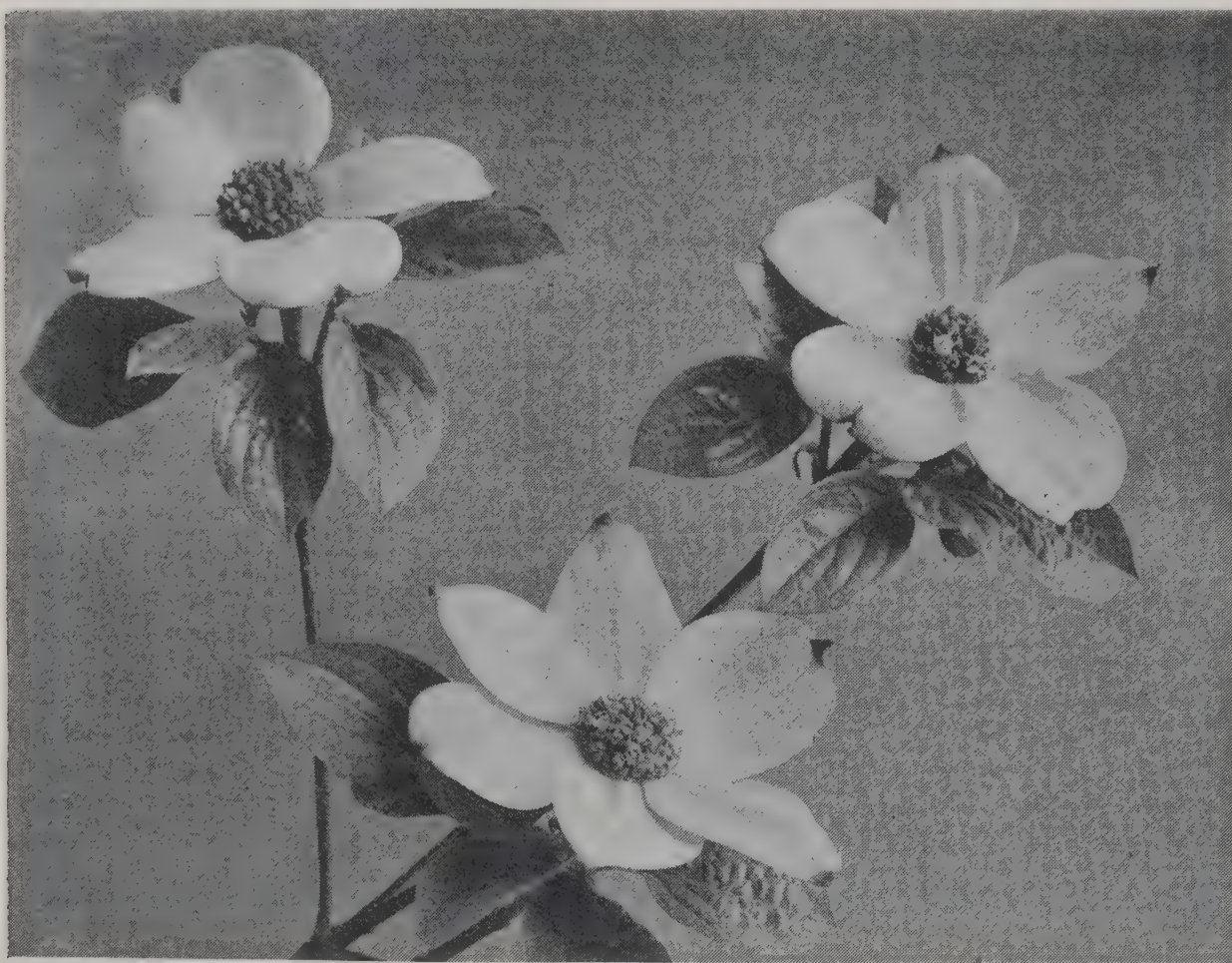
CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Androsace primuloides in a Dry Wall.—I am sending you a photograph of *Androsace primuloides*. The plants are growing in a dry wall facing south, and were very small in $2\frac{1}{2}$ -inch pots when they were planted in October, 1912. Now they are two fine clumps a foot or more across, and a mass of bloom. In dry walls we can grow *Androsaces* here without any trouble or covering with sheets of glass in the winter, as the drainage is perfect and they get every bit of sun. In the same photograph will be seen a clump of *Saxifraga pyramidalis*, also *Sedum pilosum* and *Campanula carpatia*. The last two have flowered since the photograph was taken. The *Androsaces* are growing in garden loam mixed with sea-sand and small

in the sunny South and West, where the bushes give the most satisfaction in this country. Layering is the most ready means of propagation.—A. O.

Cinerarias from Cuttings.—*Cinerarias* are so universally grown from seeds that the fact that they can be readily increased by means of cuttings is not generally recognised. Such, however, is the case; in fact, there are a few hybrids that do not produce good seed, and therefore can only be propagated from cuttings. Again, even among the florists' forms it may be desired to increase a few of marked beauty or possessing some features that cannot be depended upon to come true from seed. To ensure cuttings, the old plants should be shortened back after flowering, when young shoots will be pushed out from the base. As soon as these are about two inches in length they may be taken as cuttings, and if inserted into pots of sandy soil and placed in a close propagating-case in gentle heat they will soon root.—H. P.



A SPRAY OF CORNUS NUTTALLII WITH LARGE CREAMY WHITE FLOWERS.

stones.—E. A. FROUDE, *Kingsbridge, South Devon*.

A Beautiful Cornel or Dogwood: *Cornus Nuttallii*.—This Dogwood, which is a native of Western North America, is the most attractive species of the genus from a floral standpoint. Strictly, however, the attraction lies in the showy bracts, four to six in number, surrounding the closely packed head of flowers. These bracts are creamy white, 1 inch to 3 inches long, forming the so-called flower, which may be 4 inches or even more in diameter. *Cornus Nuttallii* is a deciduous tree up to 50 feet to 60 feet, occasionally more, in height, in Western North America. As grown in this country it is usually a bush or small bushy tree. The flowers are formed at the tips of the young shoots in autumn, gradually developing during the winter and expanding in the spring. Flowering early, the bracts and flowers are often damaged or crippled by frosts and cold winds. It is thus very desirable to plant Nuttall's Cornel in a sheltered spot, except

Primulas Causing Rash.—I see in the issue of THE GARDEN for May 16 "J. D.'s" remarks re *Primulas obconica* and *malacoides* causing a rash. Both these valuable decorative plants cause the same rash on myself, and at one time I was about to get rid of them when it occurred to me to try an ointment that I always keep by me for bruises. The rash always comes out on myself within half an hour from the time of handling the plants, so the next time I felt it coming I smeared my hands and arms over with the ointment, and was delighted to find it took away all irritation almost immediately. I should not like to say that it would cure everyone in the same way; but I think anyone who is fond of these plants and is afraid to grow them on that account would do well to try the ointment. I do not wait for the rash to come out now, but directly I have finished handling the plants I treat my hands. The name of the ointment is "Healo," made by Mr. Maurice Smith, chemist, Kidderminster. Should any of your readers try the remedy, I should like to hear

the result. I might add I hold no brief for Mr. Maurice Smith.—C. H. CLARKE, *The Garden, The Heath, Bewdley, Worcestershire*.

Primula pulverulenta Mrs Berkeley Producing Seed.—In the course of recent visits to the garden at Clandon Park, Surrey, and to the nurseries of Messrs. R. Wallace and Co., Colchester, I have seen this charming *Primula* seeding with as much freedom as, or even greater than, the species. The point is of interest, as Dr. Macwatt has repeatedly stated in the columns of THE GARDEN that this variety is sterile. It was pointed out to me at Colchester that both pin-eyed and thrum-eyed plants are in existence there. It is just a suggestion, but possibly the cross-fertilisation of the two forms is necessary in order to yield fertile seed. In any case, the fact that both forms exist is proof that there are two stocks of this variety, for either form would continue to reproduce the same kind of flower so long as it was propagated vegetatively. With *Primulas*, at least, it is not safe to generalise regarding their sterility. Thus, it was not many years ago that *P. kewensis* was described as a mule hybrid, i.e., one not capable of producing fertile seed. We now know that this hybrid produces seed with remarkable freedom.—C. Q.

A Good Red-Flowered Saxifrage.—Probably the best red Mossy Saxifrage which has come under our notice is the fine variety *Beacon*, which was raised here a season or two ago. In size the flowers are fully equal to *bathoniensis*, but the colouring is much deeper, reminding one of the brilliant depth of crimson which we get in the small-flowered *Guildford Seedling*. The stems are stiff, the blossoms held erect, and the habit of growth is distinctly good. In our opinion it is even better than our own *Fire King*, which is now in the hands of Messrs. Piper of Bayswater. Last season we formed the opinion that *Fire King* was even better than *sanguinea superba*, and if our opinion is correct, then it emphasises still further the value of *Beacon*. The whole race of Mossy Saxifrages seem productive of too many varieties, but it is well to record the appearance of any that are especially noteworthy.—P. S. HAYWARD, *Clacton-on-Sea*.

***Tricuspidaria dependens* in South-West Scotland.**—Probably the finest plant of the wonderfully beautiful *Tricuspidaria dependens*, still frequently known as *Crinodendron Hookeri*, in Scotland is that in the rock garden of Mr. W. D. Robinson-Douglas of Orchardton in Kirkcudbrightshire. It has been at Orchardton for a considerable number of years, and has stood the tests of several severe winters. None, however, proved so injurious to this fine shrub as that of 1912-13, when a wet autumn, so mild that Roses were cut the day before the severe frost came in the same garden, was followed by a sudden and very severe spell of hard weather. The temperature went down to about zero—an unusual thing in this garden close to the Solway—and remained very low for some days. In the spring *T. dependens* was a sorry spectacle, and there were but few green leaves left on it. During last summer it made a wonderful recovery, and although slightly less in stature, it now shows hardly any traces of its ordeal. At the time of writing it is laden with hundreds of flower-buds, and in a short time will be a very beautiful spectacle. It is planted on a slightly elevated mound in the rock garden and facing south; it is some 8 feet or 9 feet high, and on its mound rises well above the spectator.—S. ARNOTT.

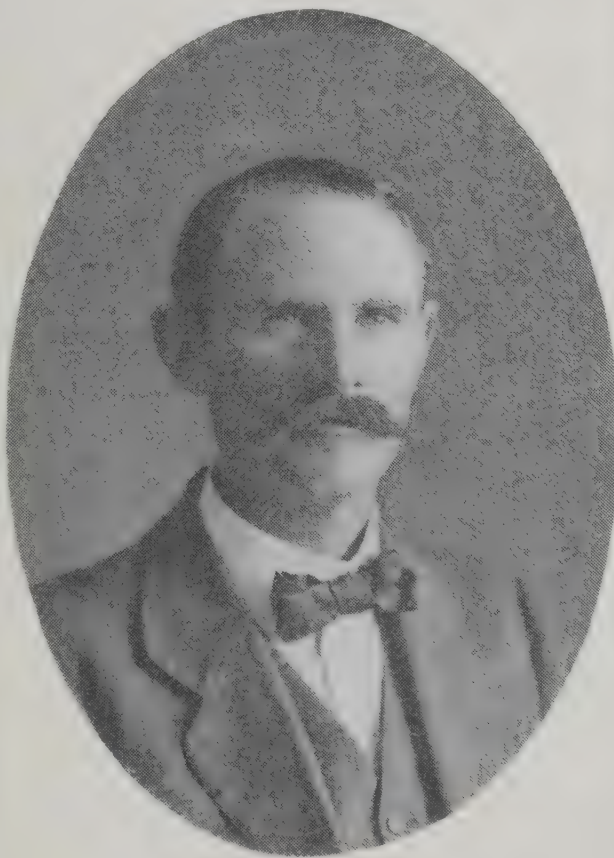
The Asarabacca Plant.—This plant is, I fear, known to very few. I have visited a good many gardens in the United Kingdom, but it was only four summers ago that I stumbled upon it in the old garden at Midmar Castle, Aberdeenshire, and I would have been unable to identify it had I not had for a companion the local doctor, who is a good botanist. The botanical name of the plant is *Asarum europæum*. Its dull brown flowers are not very attractive, but its Cyclamen-like leaves, growing in pairs, are very ornamental. It is worthy of a place at the foot of the rockwork or in a shady border; or, better still, it may be employed as an edging under the shade of trees, as I saw it at Midmar Castle.—CHARLES COMFORT.

A Good Forget-Me-Not.—About twelve months ago an article appeared in THE GARDEN from the pen of Mr. C. Blair of Linlithgow, in which he enumerated some good things worth growing—I think that was his phrasing. Among the plants mentioned was a *Myosotis* named Barr's Alpine Blue, which the writer strongly recommended, and which we at once obtained. For some time past and at present we are verifying the excellent account Mr. Blair gave of this variety. The colour is a most attractive shade of blue, much resembling *M. rupicola*, which variety one might imagine entered into the parentage of the above. Compared with Barr's Alpine Blue, several varieties now catalogued are not worth growing.—C. T., Highgate.

The Ginger Plant for Decoration.—It is from the rhizomes of this East Indian plant, *Zingiber officinale*, that we get our supplies of ginger, and on that account it is of great commercial value. I would like, however, to draw attention to it as a decorative plant, especially for the house. A well-grown plant with its Canna-like foliage, which stands the wear and tear of house decoration, is an object not to be despised. Its leaves are also highly aromatic, and are to me always more suggestive of cinnamon than of ginger. If an old plant is broken up in the spring and nice pieces are potted up into 6-inch pots, they soon make fine decorative plants if grown in a stove temperature. They should be grown in a light, rich soil, in which the rhizomes run freely.—C. C.

Too-much-alike Auriculas.—Your correspondent "Taplow," on page 239, opens up a subject which I am afraid cannot be answered briefly. He mentions that few of the varieties of Auriculas named in trade growers' lists are entered for competition, and if he excludes those that are relatively high priced, he still further reduces the number. This is, as applied to the alpine section, mainly caused by the fact that many varieties which were exhibited ten or fifteen years ago have been superseded by more recent introductions of greater merit, and not, as in the case of Sweet Peas, because they are too much alike. There are cases where Auriculas are so much alike as to be hardly distinguishable, but these cases are not many. Mrs. H. Turner and Defiance are much alike, and though once in the front rank, are rarely seen now. Among more recent and meritorious varieties may be mentioned Exquisite and Unexpected, or Miss Violet Vanbrugh and Muriel; but this does not in any way prevent them being exhibited. In the slow growth and increase of the plant will, I think, be found the reason why the bulk of the catalogued varieties of alpine Auriculas are not seen on the exhibition table. Many of the best exhibition varieties at the present time have been raised by amateur growers, and are

exhibited by them. In some cases these raisers will not part with plants, and they certainly are not tempted to dispose of their best productions until they have materially increased their stock. When they do part with plants, it is usually among their friends and members of their respective societies, by whom they are for some time shown before they find their way into trade lists. Argus and Thetis, two good exhibition varieties, were a long time before they found their way into a dealer's list, although they had been shown for many years at the National Auricula Society's (Midland Section) shows. By the time many of the varieties have increased sufficiently to sell at a cheap rate, other varieties are raised which supersede them on the exhibition table; at least this is so as regards the alpines. Among the show Auriculas there are many of the more moderate priced which are still of great value for exhibition, although the two best grey edges, George Lightbody and Richard Headley, still command a fairly high price, in spite of their



MR. E. HARRISS, HEAD-GARDENER AT LOCKINGE.

sixty years, due to slow growth and increase coupled with a large demand. A dozen good alpines taken from trade growers' lists, excluding new and expensive varieties, would be Argus, Duke of York, Janet, Miss Berkeley, Ettrick, Mrs. James Douglas, Phyllis Douglas, Charmer, Majestic, Mrs. Martin Smith, William Smith and Ilene. I would suggest that your correspondent joins one of the sections of the National Auricula Society and gets into touch with growers who hold stocks of good things not catalogued. I have forwarded the report of the National Auricula Society (Midland Section) for the last three years for your correspondent's perusal.—G. J. S. [Will "Taplow" please send us his name and address, which we have mislaid, so that we can forward the report?—ED.]

FORTHCOMING EVENTS.

June 10.—Conference on Hardy Plants at the Anglo-American Exhibition at Shepherd's Bush. (Provisional.)

PLANNING AND PLANTING THE LITTLE GARDEN.

WE are pleased to state that our competition for planning and planting the little garden is creating a great deal of interest. For the benefit of new readers we may state that we are offering cash prizes to the total value of £33 12s., as well as a number of book prizes, for the best designs for planning and planting the little garden. Full particulars of the competition were published in our issue for May 18, and a copy of the rules and conditions will be forwarded to anyone on receipt of 1½d. in stamps. The application coupon for the outline plans will be found on page iv. of this issue. All questions relating to the competition will be fully answered in our issue for June 20, and not in the present issue, as erroneously stated last week.

Important.—Some correspondents are evidently under the impression that they cannot enter the competition after June 6. They can do so as late as they wish. The only fixed date is September 1, 1914, for the delivery of the completed designs.

TWO INTERESTING VIOLAS.

Viola Red Dawn.—With our extensive culture of *Viola gracilis* hybrids it is not exceptional for a new and noteworthy variety to arise from among its fellows. The form under notice is one of the best of the present year, and offers a pleasing contrast in colour to the majority of existing varieties. The colour is a pleasing rich rosy red, and the flowers are rounded in formation and held erect upon stiff stems. The growth is very dwarf, the tufts of foliage keeping to the ground-level, and the leaves are less smooth and more rounded than in most *gracilis* varieties. If, like its better-known predecessors, it retains the same ability to withstand drought, then Red Dawn will assuredly be in the front rank of rock garden Violas. To those of my readers who know the fine yellow variety Golden Wave, I may say that Red Dawn is almost identical in every way, except in its attractive colouring.

V. gracilis Golden Gondolier.—One of the most striking hybrids of the *V. gracilis* section we have yet raised is the variety provisionally named Golden Gondolier. It possesses the same close, dwarf habit as the cream and yellow variety Gondolier (which with its hordes of blossoms neatly set above the low foliage streaming through a big drift between the rocks makes one of the grandest drifts of blossom in the whole rock garden), which is notable for its big drifts of blossom. Golden Gondolier is very floriferous, with small, ovate leaves produced in tufts against the ground. It is far neater than *gracilis* itself, and, like the other mountain Violas, can withstand drought and flourish in poor soils. The colour is a lovely clear golden yellow, without any ray markings or other colourings to mar its shining beauty. As a subject for rock massing it will prove very attractive, and will be an even more valuable plant than Golden Fleece, Golden Wave or aurea (previous *gracilis* forms), all of which were raised here.

(Clacton-on-Sea,

P. S. HAYWARD.)

GARDENS OF TO-DAY.

LOCKINGE.

CHARMINGLY situated in a well-wooded vale of the Berkshire Downs, the gardens at Lockinge, the country seat of Lady Wantage, have for many years been famed throughout the United Kingdom not only for the wonderful examples of fruit that are annually grown there, but also for the charming flower-beds and natural glades that are to be found running parallel to the mansion. This fame is due in no little measure to the skill of the late Mr. Fyfe, who was gardener there for many years.

It was our good fortune, during the opening days of May, to spend a particularly pleasant week-end with the head-gardener, Mr. E. Harriss, and through the kindness of Lady Wantage we are able to reproduce herewith photographs showing a few of the many charming features. The site at Lockinge must have been ordained by Nature to become a garden. Starting at the east end of the pleasure grounds is a vigorous spring of clear, sparkling water, which wends its way now through wooded glades and anon over rocky beds, right past the mansion, losing itself in a large ornamental lake, on the surface of which coots, wild duck and swans disport themselves. It was a great pleasure to find this natural source of beauty unspoiled by artificial attempts at embellishment. At various places along the stream-side suitable shrubs, such as Japanese Maples, hardy Bamboos, *Cytisus præcox* and *Cotoneasters*, have been planted to form more or less conspicuous features in the landscape, yet with such good taste as to render them parts of the scenery itself, instead of, as is too often the case, being glaring examples of misplaced energy. The same may be said of the herbaceous plants that find a happy home either in moist beds by the streamside or among the noble rocks that overhang the banks at the steepest parts. In the beds we found such simple yet delightful plants as Primroses, Forget-me-nots, Arabis, Aubrietias, May-flowering Tulips and hosts of others, all planted with judicious care so as to harmonise with their surroundings.

On a rather steep plateau, overlooking the stream at its widest part and commanding a fine view under the noble Elms and Beeches that stand as sentinels over Lockinge, is the wild garden, which at the time of our visit was rendered beautiful by the latest of the Daffodils and the earliest of the May-flowering Tulips. These are all planted in grass, and it was interesting to note that some of the Tulips, notably *Pride of Haarlem*, were at least as vigorous as the first year after planting, while others showed that they would need replenishing. It would therefore seem that it is not an impossible task to naturalise Tulips in

grass, providing the proper varieties are chosen. Along the northern front of the mansion we were particularly charmed with a narrow border filled with splendidly cultivated Wallflowers of several colours. At one end these were partly overhung by a magnificent bush of *Berberis stenophylla*, while near by, in a nook formed by evergreen shrubs, were two beautiful examples of *Pyrus floribunda*, a Japanese Apple that ought to be much more extensively cultivated where flowering shrubs or trees are appreciated.

On the south side we found a charming little grey stone church nestling close to the mansion, its twin gables and solid square tower forming a delightful feature in the landscape. The formal beds that are situated here were, at the time



VIEW IN THE ROCK GARDEN AT LOCKINGE. TO THE RIGHT OF THIS IS A DELIGHTFUL STREAM OF WATER.

of our visit, resplendent with Wallflowers, Violas, Forget-me-nots, Tulips and other spring flowers, the whole being so arranged as to give a pleasing and harmonious effect.

Specimen plants in tubs are a great feature at Lockinge during the summer months, and although we were too early to see these in their flowering positions, we found them in the plant houses undergoing their final hardening. *Agapanthus*, *Fuchsias* and that beautiful scented-leaved and rose-pink flowered *Pelargonium Clorinda* were a few among many that are utilised for this purpose. In the open were some remarkably fine plants of *Rose Dorothy Perkins* in tubs, the healthy appearance of the *Roses* auguring well for a glorious display of pink festoons later on.

While writing of *Roses* we must not forget the most charming of all, and one for which Lockinge is justly famed. We refer to *Fortune's Yellow*, a *Rose* that many find difficult to cultivate, and the flowers of which are a glorious mixture of rose pink and old gold. There are two wonderful plants in these gardens. One, in the conservatory, has an enormous stem and scrambles in a delightfully free and easy manner over the iron rafters of the building, where, at a height of 20 feet or more it makes wonderful garlands with its exquisite fragrant flowers. The other plant is in the corridor of the fruit houses in the kitchen garden. Although scarcely so large as that in the conservatory, it flowers more freely, and we shall ever remember the glorious sight that it presented. Truly it is

a wonderful *Rose*—when grown as they grow it at Lockinge. In the plant houses we were pleased to find some beautiful *Clarkias* in pots, large colonies of *Gloxinias*, *Coleuses*, *Lilies*, *Orchids* of many kinds, *Schizanthuses*, a very fine lot of *Malmaison* and *Perpetual-flowering Carnations*, and a great many other plants too numerous to mention in the space at our disposal.

Leaving the pleasure grounds and plant houses, we must give a passing note to the kitchen garden, in which, of course, the fruit houses are situated. It is, perhaps, in this department more than in any other that Mr. Harriss excels. Here, on May 1, were *Black Hamburg Grapes* ready to cut, and fine bunches at that. We should say that some of them—indeed, a good many—would have turned the scale at 3lb. a bunch, and we have seen much worse examples displayed at July and August shows. *Foster's Seedling* and *Buckland's Sweetwater* were also nearly ready for cutting, while later houses contained some very fine *Muscats*, which had set particularly well and which had just undergone their final thinning. *Peaches* and *Nectarines* in pots, as well as the usual trees in borders, were all in excellent condition, but perhaps, next to the *Grapes*, the *Strawberries* were the most interesting. We do not remember seeing a better lot anywhere; seldom have we found as good. The

variety used mostly is *Royal Sovereign*, and there is no doubt that for all-round purposes it is the *Strawberry* to grow. *Figs* that were just ripening were also excellent, one fine old tree of *Brown Turkey* carrying a really wonderful crop. *Melon Hero* of Lockinge, *French Beans*, *Peas* ready for gathering, and new *Potatoes* of good size and quality were a few of the many other interesting features that occupied our attention here. During the past year substantial, roomy and convenient new bothies have been erected for the journeymen gardeners, an item that will be of interest to the many who have spent the early days of their gardening careers at Lockinge, about the gardens of which volumes might be written had we the space to devote to it.



RHODODENDRON INTRICATUM

A New Dwarf Species for the Rock Garden.

Hudson & Keenan, Ltd., Printers, London, S.W.

COTTAGE TULIPS.

DARWIN Tulips can be defined with very fair accuracy. Their stems are tall and strong. The lower portion of the flower is rectangular in outline. The petals possess considerable substance, and are coloured with some shade of purple, mauve, red, or pink. But in a few cases they are so dark as to be nearly black, and so light as to be practically white. Their bases are black, blue, or white, or some combination of the same, but never yellow. Something like the above will, I think, be found to be the definition of a Darwin in the Tulip list which the Royal Horticultural Society is proposing to publish before long. All other late-flowering varieties, with the exception of the Parrots, which have lacinated petals, and the species, which are the wildings of Nature, are *ipso facto* Cottage. Hence the section includes all yellow-based flowers, such as Clio or Golden Bronze; all such dwarf ones as Glare of the Garden and Golden Crown; all pointed-petalled and elegantly shaped beauties such as Mrs. Moon and La Merveille; all slender, wiry-stemmed forms, such as Picotee, Mrs. W. O. Wolseley and retroflexa; all old-fashioned striped blooms like Chameleon, Columbus or Zomerschoon; all breeder types of other strains, such as Inglescombe Pink or Prince of Orange. Undoubtedly there are some, especially among those that fall under the last heading, that so very nearly resemble a true Darwin that the non-Tulip person will be perplexed, and I am afraid it must be so until a sort of instinctive knowledge is acquired which somehow or other tells us at a glance in which category a doubtful one should be placed.

It is a matter of history that the introduction of the wonderful Darwin strain by Messrs. E. H. Krelage and Son of Haarlem almost a quarter of a century ago did more than all else to bring the Tulip race to the prominent position in horticulture which it holds to-day. Not right away, all at once, for many of the early introductions were poor and small, and did not appeal to flower-lovers as the later and better kinds did, but it was a beginning. Cottage varieties were in the same position to some extent. Many of the best and most beautiful either had not been found or were only existing in such small quantities that neither Barr nor Hartland could put them into commerce. But they never "hit" people all at once on first sight as the Darwins did, and as they still do, and yet they have many devotees. "I am so fond of the pointed ones" is often said to me as a visitor will stop before a bed of the rich deep crimson Mrs. W. O. Wolseley or the pale warm cherry-coloured Prince Charming or the taller and more orange shaded La Merveille.

"I do like these for my rooms" a lady will say as she stands before a mass of Picotee or retroflexa, "they are not so stiff to arrange as those

strong-stemmed ones." These two remarks give two great reasons why we cannot do without the Cottage type. We must have change. It is a law of life. The flower specialist gets it in minute differences, the all-round person in broader diversities, such as that between pointed and round petals, bright and paler coloured blooms, taller and shorter height of stem. Hence Cottages are foils to the Darwins. Again, for decoration in vases the more graceful varieties must always hold their own wherever they can be *home grown*, for I freely allow that many of the prettiest and most graceful are not such travellers as Clara Butt or Mr. Farncombe Sanders, and can never be *market* flowers, as they are. These we must grow ourselves, and if we can only give them a bed or two in the kitchen garden, we may always have them, once we have purchased the bulbs, provided we look after them. I am, however, forgetting that my original intention was to

because of its height and size is a conspicuous feature. Many have said it is their favourite of the yellows. On a dull day I suppose the Tulip of all others that is most frequently selected as the one sort that "*I must have*" is the charming warm buff pink Mrs. Kerrell. It is exceedingly lovely, not only in colour, but in shape. Inglescombe Pink is a Tulip of much the same shade. This year it has been more taking even than usual, as the pink tone has persisted for a long period. It is a fairly tall grower with a conventional flower. Orange King, which has very straight-looking petals, is a beautiful orange with a pink or rose flush all over them. It is a singularly effective bloom, and although there was not a very large patch of it, it usually caught people's eyes. Now that it can be had at about 2s. to 2s. 6d. per dozen, it ought to be more used than it was in its dearer days. Salaman, a tall, Darwin-like plant, with fine silvery mauve blooms, was



FORMAL FLOWER-BEDS ALONG THE SOUTH FRONT OF LOCKINGE.

describe some of my garden favourites of the present year. A good deal depends on the weather. If the day is bright and sunny, Louis XIV. is almost invariably singled out with very often a remark like this: "What a lovely dress those colours would make!" The deep rich purple, with the rich brown edging of the petals, is very fine indeed. The large tortoiseshell comb coloured Gondvink and the rich amber Golden Bronze (syn. Toison d'Or) are always good in bright light, and are seldom passed by unnoticed. For a long time I have in my own mind coupled these together with the beautiful nicely baked biscuit brown Clio as the best of all the brown-yellow shades; now, however, I must add Prince Albert, a sort of pointed Gondvink, and Coridion (not, please remember, the Darwin Corydon—the names are sometimes muddled), which has a warm rosy grey petal with a broad edge of buff, and which

to be found in three places. It was greatly admired. I myself am inclined to put it at the head of all of this tone of colour, be they Darwins or Cottage. The brilliant scarlet Marksman and the rather dull orange red Fairy or Panorama both had many admirers, and can be confidently recommended as *At* garden plants. Of the striped kinds, Chameleon is the one most frequently picked out. Unfortunately, it is a very slow increaser, and its curious but attractive heliotrope, maroon and yellow colouring will never be very common in gardens.

I am glad to say that there are plenty of low-priced varieties that can quite hold their own with those more expensive ones which I have already alluded to. Such are Isabella (no end of people asked its name), Picotee, Golden Crown (an immense favourite), La Merveille, Inglescombe Pink, gesneriana lutea, Fairy Queen,



CYRTISUS PRÆCOX AND JUNIPERS EFFECTIVELY GROUPED WHERE THE STREAM ENTERS THE LAKE.

gesneriana spathulata, Didieri alba and Primrose Beauty, each of them good and to be found in the usual lists.

JOSEPH JACOB.

SEASONABLE NOTES ON AURICULAS.

ANY plants that were not repotted last month must now be given attention, as it is advisable for all such work to be accomplished by the end of June, excepting, of course, those plants that may have been selected for bearing seed. These ought never to suffer for lack of moisture at the roots, or the seed will not be of good quality and germination will be slow. The hot months of the year are somewhat trying for Auriculas, and wherever possible a cool position should be chosen. If ordinary wooden frames which can be easily moved about are employed, no difficulty will be experienced in finding a congenial spot. In most gardens there is generally a north wall sufficiently high to protect the plants from strong sunlight, and such a position is ideal for Auriculas throughout the summer months.

General Treatment.—The plants that were potted first are now beginning to root nicely, and may receive water at more frequent intervals; but till they reach that stage only enough should be given to maintain the foliage in a rigid condition. They will, in all probability, lose a few of the lower leaves, which must be removed directly they will part easily from the stem, and the same remark applies to the old flower-stalks, which will soon begin to turn yellow and gradually wither up. The collection ought to be gone over occasionally and the plants carefully examined,

especially during the period in which the old flower-spikes are being picked out, as it sometimes happens that water accumulates at the base and causes the rot to set in. If this is noticed in the early stages, and a little powdered charcoal or sulphur is applied at once, no harm will accrue. In growing Auriculas I always arrange the alpines in one frame and the show varieties in another, because during the summer and autumn months the lights are removed as much as possible, both day and night. I never mind the alpines getting a few showers of rain on them, but with the show kinds it is not advisable, on account of many of them being covered with farina; hence the advantage of providing them with separate frames.

Cleanliness.—One of the most important factors in Auricula culture is cleanliness, and directly any green fly is seen, the frames should be vaporised without further delay; while an occasional fumigation will kill all the woolly aphids that may be clustering around the necks of the plants. Another most destructive pest is the caterpillar, a similar insect to that we meet with on the Cabbage tribe. It is only troublesome at this time of the year, and is usually found underneath the leaves. If the attack is a mild one, the insects may be picked off; but should they be at all numerous, fumigation is the only effectual remedy. They must be exterminated at once, or the plants will be rendered unsightly for several months.

Additions to the Collection.—No doubt the enthusiast has paid a visit to one of the Auricula shows and noted any that took his fancy; but the following are desirable sorts, and are worthy of a place in any collection: Alpines—Admiration, Majestic, Dazzle, Ettrick, Golden Dustman, Miss Berkeley and Edith Winn. Show—Daffodil, Harrison Weir Bellona, Marmion, Prince Charming and Rifleman.

T. W. BRISCOE.

COLOURED PLATE.

PLATE 1495.

A NEW DWARF RHODODENDRON.

R. INTRICATUM.

THE accompanying coloured plate depicts one of the most distinct of the new Rhododendrons introduced by Mr. E. H. Wilson from China.

Messrs. James Veitch received seeds from him in 1904, and three years later—on April 2, 1907—the Royal Horticultural Society gave the plant a first-class certificate under the name of *R. nigro-punctatum*. From the true *R. nigro-punctatum* the subject of the coloured plate is readily distinguished by the short stamens; and while *R. intricatum* is in full flower at the end of March and early in April, *R. nigro-punctatum* flowers in May, and has fewer flowers in a truss.

R. intricatum is a dwarf alpine shrub common in the Tachien-lu district of Western Szechuen at 11,000 feet to 15,000 feet elevation, where the plants attain a height of 2 feet to 3 feet. Comparatively slow in growth and forming neat little

compact evergreen bushes, this is one of the best, if not the best of all the dwarf-growing Rhododendrons for the rockery and alpine garden. The small, oval leaves are a quarter of an inch to two-thirds of an inch long, and half as wide, dark green above, white beneath, freely clothed on both surfaces with shining brown scales. The flowers are in terminal clusters of three to six blooms, about half an inch across, and very freely produced. Lavender blue will perhaps best describe the dainty shade of colour. When in flower the neat little bushes are very attractive, almost suggestive of a bunch of Violets in the distance. At Kew this year several very beautiful plants were to be seen effectively grouped near King William's Temple, and these were a source of great interest to visitors.

Seeds and cuttings provide ready means of increase. The best time to insert the cuttings is in late summer, when the young shoots are partially mature. Use sandy peat and plunge the pots in a propagating-frame with slight bottom-heat. The tiny plants commence to flower when only a few inches in height. Their rate of growth is comparatively slow. Plants seven years old from cuttings, though forming freely branched bushes, are not yet a foot in height.

R. fastigiatum is a closely allied species, also from China, recently introduced by Mr. G. Forrest. The flowers are similar in colour to *R. intricatum*, but it has distinct protruding stamens, flowers a month later, and the leaves are ovate-lanceolate. This must be one of the quickest Rhododendrons to flower from seeds, plants from a sowing in the spring of 1911 flowering fifteen or sixteen months later in the autumn of 1912. A plant exhibited by Mr. G. Reuthe, Keston, Kent, received an award of merit from the Royal Horticultural Society on April 7 this year. The average height of mature plants is said to be from 1 foot to 2 feet.

FURTHER NOTES ON PEAT "ROCK GARDENS."

IN fulfilment of the promise I gave in my article upon peat "rockworks" which appeared in THE GARDEN of April 18 last, I now give a list of plants tried, or upon trial, in them; but before doing so I should like to deal with such queries of general interest as have been put to me by readers of THE GARDEN.

By the "top spit" of the bog I meant that portion of the top of the bog upon which the Heather grows. This, when dug out with a sharp spade and the Heather or other growth trimmed off, not only looks much better than the slabs of peat cut from the interior of the bog, but also retains its shape. The soft slabs of peat are liable to crack in dry weather and to wear away with continual rain, whereas the roots of the Heather in the "top spit" hold it together and prevent cracking and wearing.

"Loose peat" is the litter—from dust to lumps the size of one's fist—which is found in and around where peat is cut for fuel, and the more fibrous it is the better. The use of dried peat (which one obtains for stable litter) has been suggested to me, but I would not advise it. It is very dry and hard. As regards the question of peat obtained from limestone districts, I do not think that traces of lime in the peat are a serious drawback. Although Azaleas may not like peat from a limestone district, I find that the majority of alpine plants are not so particular in this respect. I have *Campanula alpestris* (*C. Allionii*) and other "lime haters" quite happy in limestone moraines.

As to the proportions of the mixtures in the special pockets, I do not think one can lay down a hard-and-fast rule. It is a matter for one's own judgment, influenced to a certain extent by a few general principles: (1) Plants of naturally strong growth, such as *Campanulas*, will not need any addition to the peat soil. (2) Plants of slow growth and those requiring light soil in shade like an addition of leaf-mould. (3) Heat-lovers should have a little leaf-mould and a good deal of sand. (4) *Primulas* and moisture-lovers like an addition of loam, and prefer the loose peat to be not too fine. They especially like to root into good-sized lumps of peat as big as one's fist. I have a level bed in almost full sun in which *Primula pulverulenta*, *P. Munroi*, *P. Unique*, &c., live quite comfortably squatting upon lumps of peat without artificial watering. (5) *Haberleas*, *Ramondias* and such plants seem to prefer the cracks and joins between the solid peat blocks, and, when once established in them, will bear an amount of sun that would surprise anyone who hitherto has confined them to the shadiest rocks. I am under the impression that *Ramondias* flower much better if they are so placed that they can get a little sun without undue scorching. They certainly flower much earlier, and by varying their situation one can prolong their period of flowering.

As regards the "slopes" and "pockets," these on the sunny side should be almost level if they are to retain moisture in the summer, while upon the shady sides the fall should be sharp to enable the excessive winter rains to run off. It is an advantage to build your peatwork as soon as possible after the receipt of the large blocks from the bog. They are then fresh and moist, and if, as they are built up, their edges are carefully pressed together and any cracks packed tightly with soft peat of the consistency of cream cheese, the blocks will almost invariably knit together, and the whole cliff will assume the appearance of a solid block.

A correspondent suggests utilising peat blocks cut for fuel, but these have obvious disadvantages. They are small (the blocks should be about a yard square), dry and non-fibrous, and I should think much more expensive to buy.

I have received numerous queries as to cost, but these I find the most difficult to answer. As a rule, there is not much difficulty in obtaining the top spit and the refuse loose peat from bogs cut for fuel. Both are practically useless to the fuel cutter, and can be obtained for very little beyond the price of cartage. This, of course, varies with the locality; but in any case the price of the cartage must compare very favourably with that of soil or stones. The peat is so light that horses can pull a load of peat blocks which would cover a space three or four times larger than any load of rocks they could draw.

The following list includes all plants put on the peatworks up to the present planting season. Where no letters are added, they are growing in pure peat. Where they are growing in mixtures, the letters S, L and M have been added to indicate that either sand, leaf-mould or mould (loam) has been mixed with the peat. In addition, it must be understood that plants liking sun and also moisture (such as *Gentiana verna* and

Ranunculi) have stone chips—a few round the roots and others scattered upon the surface—to prevent too rapid evaporation.

<i>Arabis stricta</i> , S for all	<i>Campanula pulla</i>
.. <i>turrita</i>	.. <i>pulloides</i>
.. <i>alpina</i>	.. <i>alaskana</i>
.. <i>androsacca</i>	.. <i>valdensis</i>
.. <i>Sturii</i>	.. <i>Hostii</i>
.. <i>blepharophylla</i>	.. <i>turbinata</i>
<i>Arnebia echinoides</i> , SL	.. <i>garganica</i>
<i>Andromeda tetragona</i>	<i>Cytisus purpurea</i>
<i>Androsace Leichtlini</i> , S	<i>Conandron ramondoides</i> , L
.. <i>carnea</i>	<i>Convolvulus althæoides</i> , SL
.. <i>Chumbyi</i> , S	<i>Clintonia uniflora</i>
<i>Asperula suberosa</i> , S	<i>Calypso borealis</i> , LM
<i>Alyssum alpinum</i> , S	<i>Claytonia asarifolia</i>
.. <i>citrinum</i>	<i>Carlina acaulis</i> , L
.. <i>gemonense</i>	<i>Castilleja acuminata</i> , L
<i>Aquilegia cærulea</i>	<i>Douglasia laevigata</i> , SL
.. <i>fiabellata</i>	<i>Daphne odorata</i>
.. <i>formosa</i>	.. <i>blagayana</i>
<i>Arenaria montana</i>	.. <i>Cneorum</i>
.. <i>verna</i>	<i>Dianthus deltoides</i>
.. <i>cæspitosa</i>	.. <i>superbus</i>
<i>Anemone valdensis</i> , L	.. <i>cruentus</i>
.. <i>blanda</i>	<i>Erica</i> varieties
.. <i>Allenii</i>	<i>Erysimum pulchellum</i>
.. <i>Halleri</i> , SL	<i>Erodium Reichardi</i> , SL
.. <i>multifida</i>	.. <i>trichomanæfolium</i> , S
.. <i>alpina</i>	.. <i>hybridum</i>
.. <i>oregona</i>	<i>Eriogonum umbellatum</i> , S
.. <i>burseriana</i>	<i>Erigeron mucronatus</i>
.. <i>intermedia</i>	.. <i>intermedia</i>
.. <i>robinsoniana</i> , L	.. <i>salsuginosus</i>
.. <i>sylvestris major</i>	.. <i>Andersoni</i> , S
<i>Armeria Cephalotes</i>	<i>Erythronium minor</i> , L
.. <i>cæspitosa</i>	.. <i>Smithii</i>
<i>Azalea mollis</i>	.. <i>grandiflora</i>
.. <i>rosæflora</i>	<i>Goodyera Menziesii</i> , L
<i>Allium acuminatum</i> , S	<i>Gentiana verna</i> , L
.. <i>cyaneum</i>	.. <i>acaulis</i>
.. <i>Nevii</i>	.. <i>Walujewi</i> , M
<i>Bellium bellidioides</i>	.. <i>Olivieri</i> , M
<i>Bryanthus empetrifloris</i>	.. <i>Kesselringi</i> , M
.. <i>glanduliformis</i>	.. <i>tibetica</i> , M
<i>Borago laxiflora</i>	.. <i>Clusii</i> , M
<i>Brodiaea grandiflora</i> , S	.. <i>excisa</i> , M
<i>Codonopsis ovata</i> , SL	.. <i>Froelichii</i> , SL
.. <i>grandiflora</i> , SL	.. <i>sceptrum</i> , L
<i>Caltha polysepala</i> , M	.. <i>septemfida</i> , L
.. <i>leptosepala</i> , M	.. <i>asclepiadea</i>
<i>Campanula azurea</i>	<i>Galax aphylla</i>
.. <i>Leutweinii</i>	<i>Geranium Traversi</i> , S
.. <i>macrorhiza</i>	.. <i>lancastriense</i>
.. <i>cæspitosa</i>	.. <i>striata</i>
.. <i>carpatia</i>	<i>Gerardia tenuifolia</i>
.. <i>pusilla</i>	<i>Gaultheria ovalifolium</i>
.. <i>raddeana</i>	.. <i>Shallon</i>
.. <i>acutangula</i>	<i>Haberlea rhodopensis</i> , L
.. <i>sarmentosa</i>	<i>Hypericum repens</i> , S



A STREAMSIDE VIEW IN "LAKE WALLAGE" GARDEN.

Hypericum reptans, S
 Hepaticas
 Houstonia serpyllifolia, SL
 Iberis gibraltarica, S
 Jeffersonia diphylla, SL
 „ dubia, SL
 Iris tectorum, S
 Lychnis Sartori
 Lippia canescens, S
 Lithospermum oleoides, SL
 „ for all
 „ Froebeli
 „ prostratum
 „ rosmarinifolium
 „ purpureum-ceruleum
 „ graminifolium
 „ intermedium
 „ Zollingieri
 Linaria hepaticifolia
 „ origanifolia
 Linnaea canadense, L
 Lindelofia spectabilis
 Lysichitum kamschatkense,
 M
 Mazus Pumilio
 „ rugosus
 Meconopsis cambrica fl.-pl.
 „ aculeata, L
 „ Wallichii, L
 „ integrifolia, L |

Myosotis Ruth Fischer
 „ azorica
 „ rupicola
 „ Rheisteineri
 „ Welwitschii, S
 Mertensia echioides
 „ elongata
 „ virginica
 „ elegans
 „ primuloides
 „ p. chitralensis
 „ paniculata
 „ sibirica
 Mimulus radicans
 „ primuloides
 „ ringens, M
 „ alsinoides
 „ masculosus vars., M
 Nocca alpina
 Ourisia coccinea
 „ macrophylla
 Omphalodes verna
 „ nitida
 „ cappadocica, SL
 Onosma albo-rosea, SL
 Oxalis floribunda
 „ enneaphylla, SL
 „ e. rosea
 „ adenophylla, SL
 Orobus cyaneus

Ranunculus myssanus
 „ gramineus
 „ amplexicaulis
 „ parnassifolius
 „ kernerianus, L
 „ anemonoides, L
 Saxifraga ascendens
 „ aquatica
 „ retusa
 „ sarmentosa, S
 „ reflexa, S
 „ citrina, S
 „ muscoides varieties
 „ cymosa, SL
 „ nevadensis, SL
 „ biternata
 „ coniferae
 „ apiculata, SL
 „ burseriana, S
 „ brunoniana, S
 „ Blairii, S
 „ aconitifolia
 „ mutata
 „ Haussmanni
 „ aspera
 „ Lyallii
 „ cernua
 „ granulata
 „ nivalis
 „ rufidula

Saxifraga integrifolia
 „ illacina, SL
 „ Aizoon lutea, S
 „ A. rosea, S
 Sedum spathulifolium
 „ pulchellum
 „ pilosum, S
 Sempervivum robustum, S
 Silene Schafta
 „ monochorum
 Sanguinaria canadensis, L
 Shortia galacifolia, SL
 Synthyris reniformis, S
 Spiranthes Romanzoffia, L
 Smilacina stellata
 Streptoptis amplexifolius
 Trillium grandiflorum
 Tanakea radicans
 Tulipa kaufmanniana, L
 Trollius varieties
 Viola gracilis
 „ declinata
 „ Elatior, S
 „ munbyana
 „ cornuta
 „ olympica
 „ flourensensis
 „ septentrionalis L
 „ rothomagensis
 „ cuculata, M

GOLD MEDAL ROSES.

HAVING met with many disappointments after a full and fair trial, I have looked up the list of new Roses that gained the gold medal of the National Rose Society since that honour was offered. It is recognised, both at home and abroad, that no other award surpasses, or even equals, this; and yet I find no fewer than fifteen winning varieties that are not even mentioned in the last extensive list of Roses issued by the National Rose Society! Up to 1908 they have discarded from the most extensive list published in Great Britain no fewer than fifteen of our premier gold medal Roses, and I venture to assert that some of the fifty-two gold medal holders that have won since that time will before long join the great majority, so far as general culture is concerned.

The following are the fifteen not included in the official list of the National Rose Society; but I must honestly say a few of them are really good, if not sufficiently so to have satisfied the large catalogue committee: Sir Rowland Hill, Salamander, Ulster, Marchioness of Dufferin, Marchioness of Downshire, Marchioness of Londonderry, Purity, Mrs. James Cocker, Sunrise, Alice Lindsell, Ben Cant, Duchess of Portland, Queen Alexandra, Edith D'ombrain and Mrs. Campbell Hall.

Many that are still retained in the official catalogue are of very little use, except to provide an occasional bloom for the exhibitor. I doubt even if Edith D'ombrain exists, except in two or three gardens besides that of the raiser or introducer. No one else catalogues it so far as I can discover. Then we have such virulent mildew breeders as Mildred Grant, Queen of Spain, Bessie Brown, His Majesty and Her Majesty among the gold medal holders, six of the very worst as regards that disease.

There are many winners of silver-gilt medals and cards of commendation at the meetings of our very deserving society (for which I have the greatest respect) that are not catalogued and are but little grown.

What am I driving at? Well, let us be more careful, and if not possessed of plenty of money, time and ground, confine ourselves more to the numerous well-tried and proved Roses that are better worth the high prices asked, and which we can obtain at cheaper rates. Some of the new and lauded improvements are priced at 10s. 6d., 7s. 6d. and 5s., while one was sent out at 21s. a plant. Upon most occasions, too, these are by no means strong or vigorous plants, and take some time to become established. Good ground plants of the finest varieties can be obtained at 9d. and 1s. each now, and I am only warning beginners against the folly of imagining they have something so superbly better in our newer Roses, while at the same time admitting that many of them are real gems that have certainly come to stay. Let us wait and see. We are not hard driven for good Roses.

Sussex

A. P.



FORGET-ME-NOTS (MYOSOTIS ALPESTRIS) NATURALISED IN THE WOODLAND.

Orobus vernus
 Enothera rhizocarpa
 „ mexicana
 „ marginata
 Papaver pilosum, S
 „ rupifragum, S
 Pentstemon Menziesii, SL
 „ pubescens pygmaea
 Pratia angulata
 „ ilicifolia
 Phlox subulata varieties
 Polemonium hybridum
 „ roseum
 Primula bulleyana, M for all
 „ Lissadell x
 „ pulverulenta
 „ beesiana
 „ cockburniana
 „ cashmeriana
 „ pseudo-capitata
 „ capitata
 „ capitellata
 „ kaufmanniana, L
 „ littoniana, SL
 „ Sueptitzi
 „ involucrata
 „ sibirica
 „ ikkimensis
 „ cortusoides

Primula deflexa, SL
 „ giraldiana, SL
 „ Heeri
 „ Eltheri
 „ ciliata varieties
 „ Auricula varieties
 „ biflora, L
 „ minima, L
 „ Flerkeana, L
 „ Peyritschii
 Parocaryum angustifolium
 Parnassia fimbriata, M
 Polygala Chamæbuxus
 „ Vayredæ
 Potentilla ambigua, S
 „ Tonguei, S
 „ Miss Willmott
 „ glabra, S
 „ nevadensis, S
 Paronychia serpyllifolium
 Ramondia varieties
 Roscoea purpurea, SL
 „ cautiloides, SL
 Romanzoffia sitchensis
 Rubus pedatus
 Ranunculus Flammula, M
 „ glacialis, M
 „ crenatus
 „ rupefolius

Viola bosniaca, S
 „ adunca
 „ glabella, M
 „ sarmentosa, S
 „ palustris, M
 „ atlantica
 Veronica Whittallii
 „ circæoides
 „ canterburyensis
 „ x Autumn Glory

Veronica edenensis
 „ tellimoides, S
 „ filifolia, S
 „ repens
 „ balfouriana
 „ Bidwillii
 „ Hectori
 „ decumbens
 „ cupressoides

MURRAY HORNIBROOK.

Knapton, Abbey Leix, Ireland.

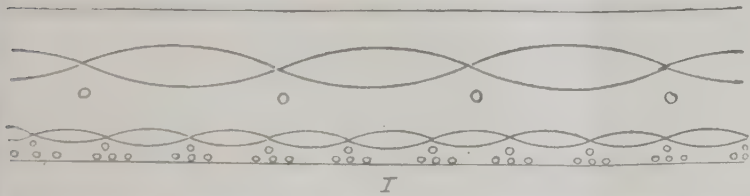
A BEAUTIFUL DWARF PHLOX.

ONE of the most attractive herbaceous plants at the present time is Lapham's Phlox, P. divaricata Laphamii. The soft blue flowers are borne in great profusion from 1 foot to 18 inches high, and it is worthy of a place in all gardens. Grown in a mass, it reminds one of a large cluster of blue Plumbago,

GARDENING FOR BEGINNERS.

SUGGESTIONS FOR SUMMER FLOWER-BEDS.

OPINIONS in reference to methods or plans of bedding out may possibly long continue to vary in a more or less degree, but I venture to think that the



SUGGESTED DESIGN FOR A SLOPING BORDER. SEE TEXT FOR DETAILS.

majority, at any rate, of amateur gardeners have come to the conclusion that the once general (I had almost said universal), and therefore favourite, because fashionable, formal "straight-line" system is *not* the most pleasing, because, generally speaking, *not* the most artistic, the result being the opposite of restful to sensitive temperaments. In the matter of laying out our gardens there is no doubt that the nearer the approach to the ways of Nature herself, the more satisfactory all-round results shall we obtain. It is, of course, admitted at once that the "straight-row" method is the easiest to arrange; but this being practically its only recommendable point, the present-day gardener who wishes for quality in arrangement, as well as in culture, of his plants will not grudge a little extra time in introducing his own individuality into his beds and borders. This is really the burden of the suggestions contained in this article, for probably no given plan will meet the desires or requirements of any in every respect. A practical illustration or two, however, may possibly serve some useful purpose as a sort of basis, alterations and variations from which, both in form and flower, can be made to suit individual tastes.

Fig. 1 is a suggestion of double-lace pattern for a sloping border, the back rows of which could be composed of, say, Marguerites in two shades of colour, and the front rows planted with duplex shades of *Nemesia*, care being, of course, taken to choose well-blending colours in every case of intermingling. In the front gaps *Violas* could be planted—one colour in each space—and a half-standard *Fuchsia* placed in the centre dot spaces.

In Fig. 2 the central triangular line could be composed of *Nicotiana* hybrids, with early flowering *Cosmos* in the three dot spaces. The next cross-over rows might consist of two colours of *Antirrhinums*, the front being edged with *Ten-week Stocks*, and *Lobelia* used as a border.

Fig. 3 is illustrative of a style which can, of course, be filled according to taste, each space marked out representing a bed of one variety, with dot plants of taller growth placed in the background, and having a border of some dwarf species.

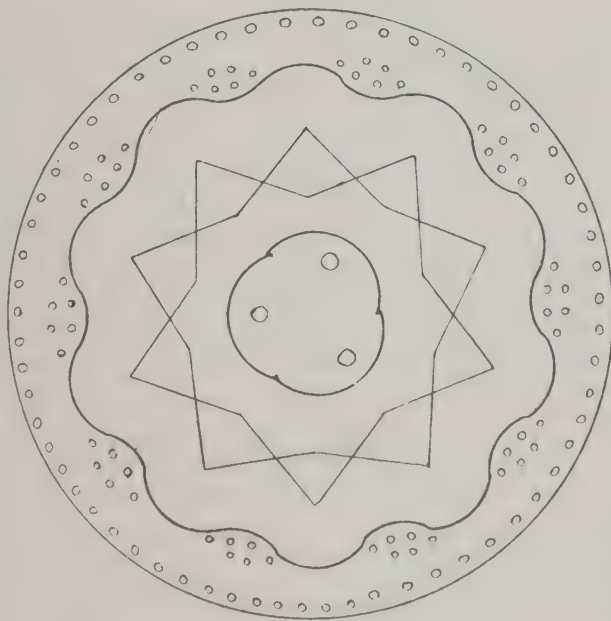
B. W. LEWIS.

FORGET-ME-NOTS FROM SEEDS.

EVERY garden should contain Forget-me-nots. They are among the daintiest of spring flowers, and very easy to grow successfully. The plants will thrive and blossom freely in moist soils and positions in sun, and where not too heavily shaded if the ground is moist. Use the Forget-me-not or *Myosotis* freely in the spring bedding schemes

associated with Tulips, and in company with Wallflowers and Polyanthus. Scatter the seeds on vacant ground in the shrubbery borders, and sow freely in the wild garden and woodland. Once sown in favourable surroundings, self-sown seedlings come up in quantity annually. In small town and suburban gardens Forget-me-nots may be used to brighten up what are otherwise rather dull corners where few plants will thrive, such, for instance, as the sunless damp north border, tufts among hardy

Ferns, and the shady front garden. The pale blue *Myosotis alpestris* is very popular at Kew, where it is freely used to carpet the ground beneath deciduous shrubs, one particularly effective combination being a bed of the pale pink-flowered *Tamarisk* (*Tamarix tetrandra*) above the blue-flowered *Myosotis*. Another lovely contrast is a



DESIGN FOR A SUMMER BED TO CREATE A BOLD EFFECT.

bed of *Myosotis* and tall yellow Tulips, Mrs. Moon or Parisian Yellow, for instance.

Time to Sow.—June is the month to sow Forget-me-not seeds. Sow where the plants are to flower, or on a spare piece of ground from which the seedlings can be transplanted in September or October to the flowering positions. Self-sown seedlings and those sown where they are to flower should be thinned to allow the plants to attain their full size and beauty. Naturalised in the wild garden and woodland, thinning is seldom attempted; but in the garden proper the reward of liberal thinning is seen in larger, more vigorous plants, freely branched and covered with good-sized flowers. When planting *Myosotis* in beds and borders, set them out 3 inches to 4 inches apart. Though, as previously noted, Forget-me-nots thrive in most soils, it pays to give the ground a dressing of manure previous to planting, or a watering with liquid manure at the beginning of April, when the flower-spikes are pushing up.

Varieties.—Several species and a considerable number of varieties are grown in gardens. The one illustrated on page 296 is *M. alpestris*; the early Forget-me-not is *M. dissitiflora*; the common Forget-me-not, *M. palustris*; and the Wood Forget-me-not, *M. sylvatica*. These are the best for the pleasure grounds and shrubberies. Then for the flower-beds the seedsmen have given much time and thought to the raising of improved varieties. These include Perfection, bright blue, rose, and white; *Victoriæ*, erect growing and freely branched, sold in three colours, blue, white, and rose; Royal Blue, a lovely dark indigo blue; Star of Love (Love Star), dwarf, bright blue; Dwarf Blue (*nana compacta*); and Dwarf White, useful for edgings to beds and borders.

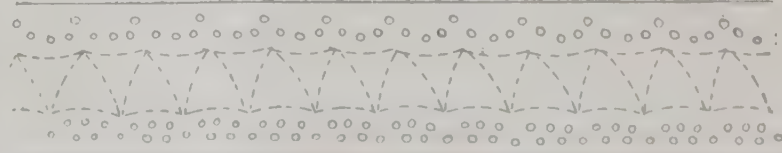
Myosotis in Pots.—To decorate the greenhouse from Christmas onwards and to supply a few cut flowers for decoration in midwinter, seedsmen have been working on a special strain of Forget-me-nots for pot culture. The plants may be grown in a frame and cold greenhouse, but are better if the greenhouse is just heated sufficiently to keep out frosts. Sow the seeds in a frame during June. Grow three plants in a triangular fashion in a 5-inch pot and place in a cold frame till November, when they should be moved to the greenhouse shelf. The seeds are usually sold under the name of the Pot *Myosotis*.

AGAPANTHUSES FOR THE OUT-DOOR GARDEN.

THESE attractive blue-flowering plants, so often grown in tubs for standing on terraces and walks, may now be removed from their winter quarters and placed in the open. Old-established plants will benefit by top-dressing, previous to which a quantity of the surface soil may be removed. During the season they should be frequently watered with liquid manure.

CALCEOLARIA MRS. GLADSTONE.

ALTHOUGH *Calceolarias* of the bedding class are not nearly so much required as they were a few years ago, when they were frequently employed, they are still essential in many gardens, and anything out of the usual run of colouring or appearance in other respects is appreciated. One of the finest we have ever seen is a most effective variety called Mrs. Gladstone. It originated in the Vale of Leven, where it was raised by an amateur, and it has been greatly



A BORDER WHERE PLANTS SHOULD BE MASSED IN THE CENTRAL SPACES.

admired wherever seen. This Slipperwort has large flowers of crimson, deeply margined with gold, while its height is a foot to 15 inches or 18 inches. It is almost hardy, and the shelter of a cold frame is quite sufficient for it in ordinary winters. It is found most valuable in some of the Glasgow parks, such as in the old garden of Ibrox Hill in Bellahouston Park.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Midseason Vines.—In well-drained borders these Vines will now require liberal supplies of water, and some stimulant must be given to encourage the growth of large berries. It is well to vary the stimulant from time to time, and always guard against overdoing it. Promote a moist atmosphere and a free circulation of air while the weather is favourable. Thin out lateral growth so that the foliage may not become overcrowded.

Late Vineries.—All late Grapes should be thinned as soon as possible, and when this has been accomplished the borders should be lightly pricked over and a good watering of manure-water from the farmyard given, and after a few days a mulching of decayed manure should be applied. Ventilation must have careful attention, especially in the early morning.

Early Peach and Nectarines Trees in Pots.—Most of the fruits will have been gathered from early trees, which will require careful attention in order to prepare them for next season's forcing. Remove the trees to their summer quarters, and allow plenty of space between them. Do not allow them to suffer from want of moisture at the roots, and syringe the foliage frequently in dry weather. Early permanent trees should also receive liberal treatment. Remove all worthless growth which is not required for next season's work, and use the syringe freely among the foliage to keep it in a clean, healthy condition, the ventilators being left open night and day.

Strawberry Plants in Pots should now be grown in the coolest position available. Keep them from coming in contact with permanent trees, or they may become infested with red spider in consequence.

Plants Under Glass.

Crotons.—Plants raised from early struck cuttings will be ready for potting into 6-inch pots. Protect from sun until the plants have become established in the new soil, after which they may be fully exposed to the light, and the syringe freely used among the foliage. Close the house early in the afternoon, allowing the temperature to rise to 90°.

Gardenias.—Plants which have finished flowering should be carefully cut back, removing all spindly growth. It is a mistake to retain old, worn-out plants, as the blooms are always small and the foliage of an inferior colour. In making new plantations it is well to provide a mild and lasting bottom-heat in order to give the plants a good start; and for this purpose nothing is better than a bed of well-prepared Oak leaves, which should be trodden tightly together, after which a layer of turfy loam and leaf-soil ought to be placed over the surface to the depth of 1 foot. Young, healthy plants should then be put out, allowing a space of 2 feet between them.

Liliums.—Plants which are growing freely should be well supplied with weak liquid manure. Place a neat stick to each plant, and keep a sharp eye on aphids, which must be destroyed at once.

Salvias may now be potted into their flowering pots. If once allowed to become pot-bound in the early season it is a difficult matter to restore them to a good colour. After potting they should be placed in a cool pit until they are well established, after which they may be grown in the open on a bed of sifted ashes. An occasional watering with weak soot-water will do much to improve the colour of the foliage.

The Flower Garden.

Dahlias.—These may be planted at once, selecting varieties as near the same height and colour as possible for each bed. Staking must be attended to as soon as the plants have been placed in position, but, in the case of small plants, only short sticks may be used at first, leaving the final staking until a fair amount of growth has been made.

Sweet Peas coming into bloom will benefit by frequent applications of manure-water from the farmyard, after which the soil should be stirred with a Dutch hoe, and if dry weather prevails,

a mulching of some kind will do much to retain the moisture in the soil.

Summer Bedding.—By this date all bedding plants will be sufficiently hardened to be planted out, and the work should be pushed forward with as little delay as possible, leaving the tender subjects until last. Water the soil a day before planting, and again after the plants are put out; and if dry weather prevails, the syringe may be used with good effect in the evening or as soon as the sun has passed from the plants. Care must be taken that none of the plants suffer from want of water before they are placed in their final positions.

The Kitchen Garden.

Celery.—The trenches should now be got ready for the early batch of Celery. Give a liberal supply of well-decayed manure, and cover with 4 inches of the finest soil available. When the plants are ready to put out, they should be carefully lifted with a good ball of soil to each plant, and planted firmly in the trenches, after which a good watering must be given, and this ought to be repeated in a few days if necessary. When dry weather prevails, the syringe should be freely used among the plants, and a dusting of soot may be given to keep insect pests in check.

Autumn-sown Onions.—The soil between the rows should be stirred with a Dutch hoe, and if showery weather prevails, a dusting of artificial manure may be given. Spring-sown Onions should be treated in a similar manner, and the plants thinned to 4 inches apart.

Leeks.—The main crop of Leeks should be planted at once, and allowed a space of 15 inches between the rows. Plants which were put out early may now be watered with liquid manure.

Chicory.—The latest batch of Chicory should now be sown, and as soon as the plants are large enough they may be thinned to 9 inches apart. Keep the soil well stirred with a Dutch hoe during the summer to keep small weeds in check.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Parsley.—As the earlier sowings frequently run to seed, in order to have a continuous supply of this indispensable garnishing throughout the year it will be necessary to make a sowing now. As this sowing will have to stand the winter, the seed should be sown in such a position that it can be easily protected in severe weather. Remember that Parsley requires plenty of room to develop, so that it will be well to sow thinly, and afterwards do not be afraid to thin out the young plants so as to avoid overcrowding.

Endive.—Although this may be sown earlier or even later than this date, the present is a suitable time to make the main sowing, as, by thinning out the seedlings from time to time, this will give a succession over a long period. To secure good crisp heads, the seed should be sown on a light, sandy soil that has been previously manured. Sow in drills 1 inch deep and 9 inches apart, and, should the weather be dry, water the bed from time to time.

Broad Beans.—Under ordinary circumstances this might seem rather late to make a sowing; still, if ground is available, it will certainly be worth a trial. Before sowing, the Beans ought to be soaked in tepid water for a few hours, and should the soil be dry, water the drills before putting in the seed. As in the case of the earliest sowing, top the plants as soon as a sufficient number of flowers have set. I have seen a very useful crop gathered from a sowing made at this time.

Herbs.—All those that were sown in boxes or frames should now be planted out, and for this purpose select a rather shaded part of the garden. Except for giving an occasional watering in dry weather and keeping down weeds, this will be all that is required for the season. To increase the stock of such herbs as Sage, Mint, Lavender and Thyme, cuttings may be inserted now either in frames or in some sheltered corner in the garden.

Some of these will make nice plants the following season.

The Flower Garden.

Begonias.—Young plants raised from seed sown in January and intended for bedding purposes may now be planted out on a border that has previously been enriched with well-decayed manure and leaf-soil. These will provide a good display in the autumn, when a selection can be made of the best of the various shades of colour and carefully noted. Some of the best of the plants can be lifted and potted while in bloom. These will be found to be very useful for furnishing the greenhouse. It is really surprising how long they will last in flower treated in this way. I have also found the flowers exceedingly useful for dinner-table decoration, and a very rich effect they produce.

Carnations.—The staking of these should be attended to without delay if this has not been previously done. When this work is delayed, there is great risk of the flower-spikes getting broken when trying to get them into an upright position. For staking I can confidently recommend the spiral green-painted ones now on the market. The work can be more expeditiously done with these than with the ordinary green-painted ones. They are much neater, and I am not sure that they are not cheaper in the end. When the staking is completed, give the ground between the plants a dusting of soot or Carnation manure, afterwards running the Dutch hoe through them.

Plants Under Glass.

Hippeastrums (Amaryllis).—Most of these will have passed out of flower, and should be removed to a house of greenhouse temperature to complete their growth, after which they may be gradually dried off. But it should be remembered that they must on no account be allowed to become dust dry at any stage. During the resting period they may be placed in a cold frame and ventilated during the day.

Begonias.—Those intended to give a display in the late summer will now be sufficiently advanced in growth to have artificial feeding given. For this purpose perhaps there is nothing better than ordinary liquid manure, although an occasional sprinkling of an approved fertiliser would also assist them. There is still time to put in cuttings of the fibrous-rooted sorts for winter flowering. When rooted, the utmost care must be exercised in watering, and guard against insect pests, which, if allowed to get a hold, will seriously cripple the young plants.

The Hardy Fruit Garden.

Peaches.—The pinching and regulation of shoots of Peach trees under glass usually receives timely attention, while those grown on a south wall out of doors are very often neglected in this respect, yet it is equally important that they should be attended to in this very necessary work. Therefore go over the trees now and remove all superfluous shoots, as this will not only assist the swelling of the fruit, but make room for the young growth that is to supply next season's crop.

Cherries.—The most forward of the early varieties will now be beginning to take on the second swelling, so that it will be necessary to protect them from the ravages of blackbirds at once. It is extraordinary what damage these birds do among the fruits, even if the fruits are only partially coloured. If the trees are against walls, they are easily protected with an ordinary net, but some difficulty will be experienced in protecting standards.

Fruits Under Glass.

Peaches and Nectarines Stoning.—The most frequent causes of fruit dropping at this period are overcropping and undue excitement. As a general rule, among large-fruited varieties one fruit to every square foot of surface covered by the tree will be ample. Avoid anything in the nature of overcropping. A medium crop is the safest guide, and during the whole of the stoning period maintain an even temperature. Under these conditions the dropping of fruit is reduced to a minimum.

JOHN HIGGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetown Gardens, South Queensferry, N.B.

SOME GOOD FORGOTTEN GREENHOUSE PLANTS.

IT is at least questionable whether in the search after novelties we do not ignore the merits of some good old greenhouse plants which were very popular in days gone by. Some of them at least would well repay a revival in their favour, and would doubtless be much admired if brought forward once again in good condition. Difficulties attending their cultivation are, no doubt, answerable for many subjects dropping out of cultivation, but what was possible in days gone by should certainly not be such a difficult matter with improved glass structures, heating and other appliances. In recalling some of the favourites of bygone days, the following suggest themselves as a few of those whose almost total disappearance from gardens is a decided loss.

Burchellia capensis.—An evergreen shrub, clothed with dark green, ovate leaves and bearing bright scarlet, tubular-shaped flowers at the points of the shoots. The "Dictionary of Gardening" refers to it as a stove plant, but it will thrive perfectly in the warmest end of the greenhouse, where, however, it is a little later in flowering than in the stove. Needs a mixture of loam, peat and sand.

Canarina Campanula.—A herbaceous plant which, from a stout rootstock, in winter pushes up a sturdy stem, on which the flowers, in colour yellowish with red nerves, somewhat suggestive of an Abutilon, are borne during the early months of the year. Thrives in a mixture of loam, leaf-mould, well-decayed manure and sand in an ordinary greenhouse.

Cedronella canariensis.—This, also known as *Dracocephalum canariense*, is popularly termed the Balm of Gilead. Its attractive feature is the delicious fragrance of the leaves when gently rubbed. Cut sprays of this used to figure in the old-fashioned nosegays at one time so much in vogue. Soil: Loam, leaf-mould and sand. Thrives in the greenhouse.

Chorizema Henchmannii.—One of the most beautiful and distinct of all the Chorizemas, and, withal, one of the most difficult to grow. Though it occurs in the "Kew Hand List," it has almost dropped out of cultivation. Soil: Peat, loam and sand. Does well in an ordinary greenhouse.

Elæocarpus cyaneus.—A small Australian evergreen tree that will, however, flower freely in a small state. The drooping, bell-shaped flowers are pure white, and beautifully fringed at the edges. This furnishes a good illustration of an old plant being rejuvenated, for it was introduced over a century ago, and yet was comparatively unknown when brought forward by Messrs. Veitch a few years since. It then obtained a first-class certificate from the Royal Horticultural Society. Grows and flowers well in the greenhouse in a mixture of loam, peat and sand.

Eustoma russellianum.—Under the name of *Lisianthus russellianus* this North American Gentian Wort used to be regarded as a good test of the cultivator's skill. The most satisfactory results were obtained by treating it as a biennial, when the comparatively large rich purple blossoms were borne in great profusion. Seeds should be sown in June and the plants treated much the same as *Schizanthus*, that is, put in their flowering pots in February. Soil: Loam, leaf-mould and sand. It requires a greenhouse temperature.

Fugosia hakeæfolia.—An Australian member of the Mallow family with curious narrow leaves, and large purple lilac blossoms borne during the summer months. From its uncommon appearance it is sure to arrest attention. Of easy culture. Needs an ordinary soil in the greenhouse.

Hovea Celsii.—Though now known by the specific name of *Elliptica*, this plant in olden days was much grown as *H. Celsii*. Of the hard-wooded plants at that time popular, it was looked upon as a difficult subject to grow. It belongs to the Order Leguminosæ, and the rich blue Pea-shaped flowers are borne in clusters from the axils of the leaves. Needs a mixture of peat and sand, careful watering, and a greenhouse temperature.

Lagerstrœmia indica.—This, which is sometimes known as the Crêpe Myrtle, is a deciduous shrub, introduced from China about a century ago. It is more fitted as a good-sized bush in the conservatory than as a smaller specimen, as when large it flowers freely. The beautiful bright pink flowers with crisped petals are borne in loose panicles during the summer months. Will grow freely in ordinary potting compost in the greenhouse, and in winter, when devoid of foliage, should be kept moderately dry.

Leschenaultia.—The scarlet-flowered *Leschenaultia*, which was introduced from Australia in 1824, was, among hard-wooded plants, considered to be an extremely difficult subject to cultivate successfully. This did not, however, appear to be the case with the blue-flowered *Leschenaultia biloba* major when Messrs. Balchin of Hassocks used to grow it so beautifully in that delightful nursery on the South Downs. Soil: Peat and sand. Needs an ordinary greenhouse.

Nerium Oleander.—Perhaps it is going rather too far to refer to the Oleander as a forgotten plant; but its merits as a beautiful flowering shrub might certainly be more often recognised than they are now. A lover of sunshine, its non-flowering may often be traced to too much shade. Needs a mixture of loam, leaf-mould and sand, and a greenhouse temperature, with plenty of light.

Pavetta caffra.—In the palmy days of Chiswick, half a century or more ago, this was a favourite exhibition plant. It is an evergreen shrub, and the rounded clusters of white flowers, with long, prominent styles, are borne in great profusion in the summer. This *Pavetta* is nearly related to the *Ixoras*, which it much resembles. Will thrive in ordinary potting compost in the warmest part of the greenhouse.

Pleroma elegans.—This South American Melastomad has large blossoms of an intensely rich blue colour. Like some other members of the genus, it is not very amenable to cultivation. Still, shown as it used to be, it would, I think, gain universal admiration. Soil: Peat and sand. Good drainage, plenty of water when growing, a moist atmosphere and a greenhouse temperature are needed.

Russellia juncea.—A peculiar Rush-like plant, with drooping racemes of small tubular-shaped, scarlet flowers. Needs an open peaty soil, with plenty of water, and the warmest part of the greenhouse.

Trichinium Manglesii.—This, which belongs to the Amaranth family, is of a perennial nature. The inflorescence resembles large, oblong-shaped tufts of whitish hairs, whence pink tips protrude. Though at one time fairly well known, it is now, outside of a botanic garden, rarely seen.

Soil: Loam, leaf-mould and sand. It should have a light position in the greenhouse.

Tropæolum.—It may, perhaps, be considered by some that the *Tropæolums* are not a neglected class; but the tuberous kinds, such as the pretty blue *T. azureum* and *T. tricolorum*, with its scarlet and black blossoms, might well be more grown than they are now. Kept dry when dormant, they may be potted in September in a mixture of loam, leaf-mould and sand. Greenhouse.

These notes on old-fashioned greenhouse plants might be considerably extended, but enough has been given to show that we might do worse than allow some of them to occupy the position in gardens that they once held.

H. P.

A SCOTTISH LADY GARDENER.

NOT many of our most enthusiastic lady horticulturists are more worthy of recognition in the columns of THE GARDEN than Mrs. McDouall of Logan House in Wigtownshire.

With the assistance of her son, Mr. Kenneth McDouall, the cultured and genial proprietor of the Logan estates, and the able superintendence of her head-gardener, Mr. R. Findlay, she has made Logan and its noble environment a centre of attraction during the summer and autumn to crowds of deeply interested visitors. Mrs. McDouall, like all true lovers of Nature, is greatly enamoured of flowering trees and shrubs, Azaleas, Rhododendrons (of which she has a splendid collection), Cherries, Laurels and Solanums being special favourites. Ipomœas, Allamandas, Bougainvilleas and exquisite climbing Roses and Heliotropes adorn the conservatories. Among the fruits specially cultivated in the extensive hot-houses are Vines, Peaches, Oranges, Nectarines, Figs and Guavas. One of her latest and loveliest acquisitions is a pond for the cultivation of the finest *Nymphæas* in the centre of the garden, in which also the reflections of the enviroing trees and flowers on a calm evening in June are beautiful beyond description. The two large rock gardens—the creation of Mr. Findlay—are supremely fascinating about the beginning or middle of May, when such beautiful *Primulas* as *japonica*, *pulverulenta*, *cockburniana* and *bulleyana*—not to speak of a myriad other flowers of intensely contrasted colours—are to hundreds of visitors as a veritable revelation of floral and artistic capability.

Mrs. McDouall, like her accomplished brother, Sir Archibald Hepburn, has always been a great cultivator of Roses and Oriental Lilies. Of the former she has nearly all the more modern varieties, though she still adheres lovingly to many of her first favourites, such as *Mme. Abel Chatenay*, *Captain Hayward*, *Viscountess Folkestone*, *Duke of Edinburgh*, *Caroline Testout* and the incomparable *La France*. Among the Lilies, which are most successfully cultivated in the spacious gardens at Logan House, are the Himalayan *giganteum*, the Persian and Caucasian *monadelphum szovitzianum*, *pardalinum* (for the most part rare hybrids from the Californian *Panther Lily*), *auratum platyphyllum* and *virginale* (which are grown here superbly), *candidum* (which Mrs. McDouall grows with refined artistic instinct among pink and scarlet Roses), *Henryi*, *Hansonii*, *longiflorum Wilsonii* and *speciosum magnificum*. It only remains to be recorded that Logan House

has a noble environment of woods, in which Limes, Larches, Laurels, Chestnuts, Hawthorns, Cedars, Oaks, Pines and Sycamores are conspicuous, from the midst of which it looks out majestically over a beautiful miniature lake across the luminous Bay of Luce to the Minnigaff Mountains, that grandly bound the horizon. Overlooking a fine avenue of young *Dracænas* from an elevated terrace of the garden (like the hoary past contemplating the aspirations of the present) is an Ivy-covered fragment of the ancient castle, where in the memorable language of Thomas Gray: "The moping owl doth to the moon complain, Of such as wandering near her secret bower, Molest her ancient, solitary reign."

DAVID R. WILLIAMSON.

INDIAN AZALEAS.

VERY few of the hard-wooded plants so much grown at one time have retained their hold on the public, but still there are some. Occupying the foremost place come the different varieties of the Indian Azalea, which are probably grown now in even greater numbers than they were before. There is, however, a vast difference in the plants, for whereas now most of them are in the shape of neat, naturally grown bushes, grafted on to clear stems from 6 inches to 9 inches in height, in bygone days they were largely grown as formally trained standards or pyramids. As a youngster I was taken to the great International Horticultural Exhibition at South Kensington in 1866, and nothing made so great an impression on my boyish mind as the trimly trained Azaleas with their masses of colour. Now, however, plants of a hard formal outline are not appreciated; hence Azaleas of this class are by no means popular. True, standard-grown plants have come somewhat to the fore within the last few years; but in their case the heads are to a great extent allowed to grow in a natural manner.

Though Azaleas in the shape of comparatively small plants are now so largely flowered in this country, they are nearly all propagated and grown in Belgium, where in some parts their culture forms a thriving industry. They are planted out in a light, spongy soil largely composed of leaf-mould, in which, with unremitting care and attention, they grow luxuriantly and set their blossoms freely. Early in the autumn they are carefully lifted and immense numbers sent to this country. The large, loose masses of roots are, to the uninitiated, somewhat of a puzzle to get them into pots of reasonable size, or even comparatively small ones, as is often done. Where the mass of roots is too large, it may be safely reduced to more reasonable dimensions, and by pressing together—which from its light, open nature is readily done—the plant can be accommodated in a pot of suitable size. After potting, the plants must be kept rather close and shaded, giving a syringing two or three times a day. They must also, of course, be thoroughly watered. In this way the young hair-like roots will soon recover from the check of removal and become established.

A notable feature of the Indian Azaleas is the length of time over which their flowering season extends, for if due care is taken in the selection of varieties, their showy blossoms may be had for nearly, if not quite, one-half of the year.

For a long time the double white-flowered variety *Deutsche Perle* was regarded as the earliest of all, but an even more precocious kind has been very much in evidence within the last few years. This is *Mrs. Petrick*, whose semi-double flowers are of a deep rose colour. A class of Azaleas just now very popular are those varieties whose blossoms are of a deep rose or salmon rose tint, with a light-coloured centre and margin, this last being often prettily crisped. One of the earliest of these to flower is *J. B. Varonne*, while among the latest is *schryveriana*. A desirable midseason kind is *President Oswald de Kerchove*, which is very much grown. With regard to a selection of varieties, it is a difficult matter to advise upon, as opinions vary greatly. The better way, when it can be done, is to select the plants when in flower, for there is now a long list of beautiful kinds from which a choice can be readily made. One thing, however, which may be noted is that as white flowers are much appreciated, the merits of *Niobe* for late flowering must on no account be omitted. The blossoms are double and of a somewhat ivory white tint.

A method which has cropped up within recent years of growing some of the small-flowered kinds, but especially the bright carmine crimson variety *Hexe*, is to strike them from cuttings, under which treatment they form dwarf, bushy plants in quite small pots, and when crowded with blossoms they meet with a ready sale. Other varieties are grown in the same way, but none is so popular for the purpose as *Hexe*, which was cultivated in limited numbers for years before its merits for this mode of treatment brought it prominently forward.

Repotting.—Annual repotting is by no means necessary; indeed, old-established plants will grow and flower for years in a satisfactory manner without being disturbed at the roots. Complaints are by no means infrequent of non-success in the culture of the Azalea, and this, no doubt, arises, in many instances at least, from a period of neglect immediately after flowering. This is the most critical time with Azaleas, as they should then be encouraged to make their growth for another season by keeping them somewhat warmer than before, and by frequent syringing in order to prevent thrips attacking the leaves. Should the plants need repotting, this must be done as soon as the flowers are over. A suitable compost is fibrous peat and sand, while some prefer a little loam mixed with it. In any case, the new pot must be clean, effectually drained, and sufficiently large to allow of some fresh soil between the old ball of earth and the side of the pot. This fresh soil should be rammed down very firmly and evenly, taking care that the main stem is not buried deeper than it was before. W. T.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Twickenham Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Twickenham Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ASTERS NOT DOING WELL (*D. W., Surrey*).—We can find nothing wrong with the Asters except that they appear rather yellow. This may be due to overwatering, to lack of light, or to lack of potash, and we suggest watering the plants with a solution of 1oz. of sulphate of potash or half an ounce of sulphate of ammonia to a gallon of water once a week.

TULIPS FAILING (*York*).—We fear your Tulips are being attacked by the fungus *Sclerotinia parasitica*, and that the soil is infested with the resting bodies which that fungus produces. The only thing to do will be to remove the soil thoroughly now or in early autumn to a depth of 3 feet and replace with fresh, unless you are willing to forego the growing of Tulips for two or three years.

TREES AND SHRUBS.

AZALEA TO NAME (*R. F. C.*).—One of the Ghent Azaleas, a hybrid containing a good deal of the blood of *A. nudiflora*, or, correctly, *Rhododendron nudiflorum*.

KITCHEN GARDEN.

CULTURE OF THE CARDOON (*W. B.*).—Plant out in rich soil 3 feet apart (if more than one row is wanted they should be 5 feet apart, as much soil is required for earthing up), and maintain a free growth by occasional soakings of water. The leaves should be secured to stakes as they grow in height. About the middle of August the plant will have attained to its full growth, and the blanching process should then be begun. This is done by gathering the leaves together and tying loosely to stakes; then wrap round loosely with leaf-bands, finishing by earthing up with soil to a height of 2½ feet or 3 feet. The blanching will be completed towards the end of October, and the midrib of the leaf, which is the portion to be cooked, will be ready for use.

MISCELLANEOUS.

YELLOW AND BROWN MUSTARD SEED (*Y. Z.*).—There are two kinds of Mustard grown for commercial purposes, *Brassica alba* and *B. nigra*. The seeds of the former are yellow, while those of the latter are brownish. The seeds of the two kinds are usually mixed before grinding for commercial mustard, but when ground separately the seeds of *B. nigra* produce a much darker powder than those of *B. alba*.

LARVÆ OF WINTER MOTH (*E. J. H.*).—The grubs are the larvæ of the winter moth. This insect attacks a large variety of trees, and all the fruit trees are subject to its attack. It would be well to spray the trees immediately with lead arsenate solution, made according to the directions furnished with the material as bought from the sundriesmen. This spray material, which is, of course, very poisonous, should be purchased in the paste form.

SOIL PESTS (*Rev. W. E. O.*).—We think your best plan will be to make holes at intervals of a yard on both sides of the row of Sweet Peas and about nine inches to twelve inches away from the plants, and pour into each a teaspoonful of carbon bisulphide. The holes ought to be about eight inches or nine inches deep, and should be covered in immediately the liquid is poured in. The fumes will then diffuse in the soil and kill the insects without damaging the roots of the Sweet Peas. It is important to keep the liquid, which is very deadly to animal life, as far as possible from a light, even that of a glowing cigar, as it is extremely inflammable, though the temptation to smoke while using it is great, owing to its evil odour.

NAMES OF PLANTS.—*F. W. A.*—1, *Heuchera sanguinea*; 2, *Asperula odorata*.—*W. E. P.*—*Scilla peruviana*.—*Mrs. Sartorius*.—1, *Rubus deliciosus*; 2, *Prunus cerasifera*.—*Good Husband, West Riding*.—1, *Phlox amœna*; 2, *Sedum roseum*.—*F. M., Bucks*.—*Veronica gentianoides*.—*H. B.*—1, *Spiraea van Houttei*; 2, *Polygonatum biflorum*; 3, *Saxifraga canaliculata*; 4, *Fuchsia*, garden variety; 5, *Phyllocactus Ackermannii*; 6, *Iris pallida*.—*C. R. W., Cornwall*.—*Tricuspidaria dependens*, syn. *Crinodendron hookerianum*.

THE GARDEN.

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JUNE 13, 1914.

NOTES OF THE WEEK.

New Fellows of the Royal Horticultural Society.—At the meeting of the above society held on Wednesday, the 3rd inst., 230 new Fellows were elected. We understand that this number has only been exceeded once before.

Roses and Clematises.—A very charming effect can be obtained by planting the Mountain Clematis, *C. montana*, and the beautiful Rose Carmine Pillar so that they may ramble together at will. The instance we have in mind is where they have been growing for some years over an old Ivy-covered summer-house in a wild, careless way without receiving any attention.

The Iris Border at Clandon.—Irises have long been a feature of the beautiful gardens at Clandon Park, Surrey, and seldom has the Iris border looked better than at the present time. The border runs by the side of a lake. *Iris sibirica* and its varieties are grown by the lakeside with their roots in water, while those Irises belonging to the *germanica*, *pallida*, *squalens* and *flavescens* sections are now freely flowering in the border. One remarkable feature of the border is that in the great wealth of bloom some varieties are flowering that have not done so for years.

The Burning Bush.—This interesting plant, known by the botanical name of *Dictamnus Fraxinella*, is one of the most striking and interesting herbaceous plants in flower at the present time. Its stately, erect spikes of either white or purplish flowers stand out very conspicuously. The hot, dry weather does not in the least affect either flowers or leaves, and they will remain fresh for some time either growing or cut. Apart from this, the plant does not grow to any great size, which is an advantage for small gardens. It is an excellent subject for naturalising in the wild garden, and derives its common name from the fact that in the evening, after a very hot day, fumes are given off, which will sometimes ignite when a lighted match is held just over the plant.

A Beautiful Dwarf Pink.—One of the most attractive features in the rock garden at Kew just now is a colony of Pink Spencer Bickham. The plants are situated by the steps leading from the Orchid-houses, and are creating quite a blaze of colour. This variety was raised some years ago by crossing the Cheddar Pink (*Dianthus*

cæsius) with the Maiden Pink (*D. deltoides*). The flowers in size and shape resemble those of the first-named parent, but are of a much more brilliant rose colour. It is a Pink that ought to be much better known than it is. In common with most others of its race, it needs well-drained soil, but beyond that does not present any serious cultural difficulties.

An Uncommon Hardy Annual.—Why is it that *Collomia coccinea* is so seldom seen in

almost any kind of soil, and we commend it to those of our readers who appreciate dainty flowers. It is interesting to find a native of Chili withstanding our winters.

Rose Conrad F. Meyer.—What a glorious Rose this hybrid *rugosa* is! Anyone who wants a strong-growing variety to scramble over trellis or rustic poles, or to climb the side of the dwelling-house, should make a note of it now to plant next autumn.

We have had a young bush flowering for the last month, its large, full, silvery pink flowers being produced in abundance. As these emit the true old-fashioned Rose perfume, and that in bountiful degree, we have no hesitation in proclaiming it one of the best pillar or rambling Roses. It is also good in the autumn.

Dwarf Flowering and Berried Shrubs.—The *Pernettyas* are attractive shrubs, and are worthy of notice for the beauty of their berries during the winter months. But apart from the fruits they are worthy of recognition at the present time, when they are laden with their small, Lily-of-the-Valley-like flowers. Owing to the waxy texture of the blossoms, they remain in good condition for a long time if small sprays are gathered and placed in water just as the blossoms are about to expand. The purity of the blossoms makes a striking contrast to the reddish colour of the bark and the dark green of the mature foliage. *Pernettyas* are well worthy of a place among flowering shrubs, and will succeed in any soil providing it is free from lime.

A Charming Bramble for the Rock Garden.—*Rubus arcticus*, the beautiful alpine Raspberry, is an excellent little plant for a damp, shady spot. Although one of the smallest of the genus, only growing from 5 inches to 6 inches high, it is one of the most attractive with its rosy

purple flowers, each the size of a shilling. It is very free, both in growth and in the production of flowers, and a small piece will soon form a large mass. Apart from its attractive flowers, the fruit is also very ornamental when produced in quantity, as well as being nutritious, for Linnaeus in his "Flora Lapponica" states that often, when he was sinking with hunger and fatigue, he was revived by the wine from these berries, and some people in the North of Sweden make a syrup, a jelly and a wine from them.



THE IRIS BORDER AT CLANDON PARK.

gardens? Just now we have a number of self-sown plants that withstood the winter, and each has made quite a small bush from 12 inches to 15 inches high and nearly as much in diameter. Each shoot is terminated by a cluster of vermilion red blossoms, which resemble very much in appearance those of the smaller-flowered *Bouvardias*. From past experience we know that the plants will continue the display over a long period, and will produce seed freely and so perpetuate themselves. This hardy annual will thrive in

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Draba (Petrocallis) pyrenaica.—Surely the note in THE GARDEN of May 23 about this nice alpine is belated, and [therefore misleading. "Just now it is opening its flowers"; with me they are over. It begins to flower in the first week of April; in the third week it is sometimes so closely set with them that hardly a leaf is visible. At the present time it is a bright green cushion. —HERBERT MAXWELL, *Monreith*. [At the time the note referred to was written, i.e., May 18, this plant was in full flower in several gardens in the London district.—ED.]

Hardy Cypripediums.—In the interesting article on this subject (page 271) "W. I." does not mention *Cypripedium mandschuricum* (a beautiful *C. Calceolus* with big flowers), *C. microsaccos* (with brown and pink flowers), and the three beautiful varieties of *C. ventricosum*, *C. v. album*, *C. v. lutescens* and *C. v. roseum*. These three varieties are far the best of all the hardy *Cypripediums*. We had them in flower last week, and everybody who saw the beauty of our sheltered bed was enthusiastic over these three varieties. We grow them under shade in our umbrosum, without any protection in winter, but rather dry. They seem to be hardier and easier to grow than *C. macranthum*.—H. CORREVON, *Floraire, Geneva*.

—The very interesting article on hardy *Cypripediums* which appeared in your issue of May 23, page 271, prompts me to send a photograph of *Cypripedium Calceolus*. It has reddish brown sepals and a yellow pouch. I note that it is referred to as a native species. I have often seen it described as a native plant, but so far have not yet had the pleasure of finding it in the wild state. One work that I have by me says that it grows on the Cotswolds in turf in very gritty, fibrous limestone soil in full sun. I have searched in vain in this and other localities for this plant, and am of the opinion that it is now extremely rare, if not extinct, in the wild state in Nature.—C. Q.

Hybrid Primula Leddy Pilrig.—In reply to Mr. Arnott's note in May 30 issue of THE GARDEN relating to the above Primula, and especially to that part of it which deals with the parentage of same, I assure him that the parentage as given by me is perfectly correct. Had I been in the habit of hybridising at random (which I am not), even then I would have had little difficulty in tracing the origin of the hybrid, as certain distinct characteristics from both parents are clearly stamped on it. For the benefit of readers of THE GARDEN who take an interest in hybrid Primulas, I here give the names of the parents of the hybrid Primula in question. They are as follow: *P. bulleyana* and *P. beesiana*, *P. bulleyana* being the seed parent. The colour of the hybrid combines the purple red of *P. beesiana* with the apricot of *P. bulleyana*. It has a faint Auricula-like perfume,

which it takes from the pollen parent, *P. beesiana*. Apart from the question of parentage of *P. Leddy Pilrig*, I thank Mr. Arnott for his favourable criticism of its merits as a plant.—W. ROBERTSON.

Early Gooseberries and Vegetables.—I began picking Gooseberries on May 7. I also dug Potatoes (*Sharpe's Victor*) and cut a dish of Globe Artichokes on May 30. These were of good size and quality, and both were from the open ground. The late frost has done no damage here. I have been a reader of your valuable paper for years, and have picked up many real helpful hints from its columns.—FRANK MITCHELL, *The Gardens, Beacon Grange, Hexham-on-Tyne, Northumberland*.



A RARE BRITISH ORCHID, CYPRIPEDIUM CALCEOLUS.
THIS IS SELDOM FOUND NOW IN A WILD STATE.

Our Native Flowers.—In your issue for May 30, page 279, there is an interesting letter on the similarity of our native flowers in separated districts. In regard to the Blackthorn, here on the Wiltshire Downs the profusion of bloom was marvellous this spring. Hedges were full of bloom, and small trees only a few feet high were literally crammed with blossoms, the effect of these masses of white standing out against the dark green of the Pines, or mingling with the delicate April green of other trees, being most effective and beautiful. Gorse has been plentiful, but scarcely so abundant as last year, when every bush was a blaze of yellow. Last year, however, Hawthorn was conspicuous by its absence, for, of all the hundreds of trees in the district, not one was seen with

any clusters of bloom. This spring every tree is flowering abundantly, and filling the air with a pleasant fragrance. These trees have not been affected by the bitter wind and severe frost of the 25th and 26th ult., though many wild flowers, such as Campions and Stitchwort, look shrivelled up, and the Bracken in sheltered dells seems scorched as if by fire.—E. A. P., *Wills*.

The Pollination of Fruit Trees.—The recent importation of Dutch bees should, apart from the profit of honey produced, also prove of considerable assistance to fruit-growing. Late frosts, insect and fungoid pests may account for many fruit failures, but I venture to say that non-pollination is the cause of not a few. Certain it is that where bees are kept, fruit sets more freely. To this most of us will agree. For example, as to distribution of pollen, take the wet flowering season of last year and the poor crop that followed. The same period of this year, though not without its frosts, particularly sharp on May 2, but dry, and pollen easily distributed, resulted in the splendid prospects of a fruit crop this year. Also, some varieties of fruit trees, being self-sterile, require the pollen from another variety which may be some distance away. In this case the help of the bee is most useful. Growers of fruit under glass have their artificial means of pollination, not trusting to chance. Fruit in the open is dependent in this respect entirely on natural agencies, which may be assisted by bees. Therefore the introduction of still larger quantities of bees should be welcomed, and growers, cottagers and others encouraged in every way to keep them.—F. MARSHALL.

Emmerton on the Auricula.—In THE GARDEN for May 30, page viii., your correspondent G. F. W. Herbert, in his notes about Isaac Emmerton, which originally appeared in Hogg's Supplement to his "Treatise on Florists' Flowers," falls into an error where he says that Emmerton's famous treatise on the Auricula was published in 1818. Emmerton published the first edition of that work in 1815, and the second appeared in 1819. Although Hogg claims to have had some share in the writing of it, yet on reading Emmerton's preface it is not apparent that it was other than an independent effort of his own, and Emmerton was dead when Hogg's Supplement was published. There is nowhere any record of an 1818 edition, and probably that date may have been a mere slip of the pen on the part of your correspondent or a printer's error. Both Johnson and Lady Amherst, in their bibliographies, give the year 1816 as the date of Emmerton's publication, but this date cannot have been verified. Johnson makes no reference to a second issue, while Lady Amherst does, and places it under its proper date, 1819. The first edition is exclusively an Auricula treatise, but the later one contains chapters on the Polyanthus, Carnation, Pink and Ranunculus. Both editions are in my library, and the dates given by me are unquestionable.—C. H. P.

Protecting Fruit Blossom.—We gardeners in the North are much interested in the notes about the protection of fruit blossom during the early months of summer. It may prove surprising to readers who live in the sunny South to know that I have to protect my Pears here; if I did not, the crop would be infinitesimal. Last year I had twelve large sashes over my choicest kinds, and the others were protected with mats; but, in spite of all that, the crop was far from satisfactory. Of course, it must be mentioned that the soil is not of the highest order for Pear-growing, since it is heavy and cold; yet, after many years' "manufacture," it ought to be fairly good now. Most of the trees are on the east and north walls, and so sheltered from the worst winds (near Glasgow). For the past six years I have been trying to find a good variety outside the older sorts that will suit my place; but, though I have patronised nurserymen in all parts of the country, I have not yet had the satisfaction I desire. The laborious practice of protecting the trees during their period of bloom seems inevitable, and I have resigned myself to the unlucky Fates which planted me—and the Pears—in an uncongenial district.—H. H. A., *Glasgow*.

Vitality of Seeds.—With regard to this subject, referred to by Mr. Charles Comfort on page xx. of *THE GARDEN* for May 23, I may, perhaps, be allowed to add a few words to show that some seeds more than others have a tendency to retain their vitality for long periods before germinating, and are more or less constant in this habit. Many years ago I visited the extensive grounds of Mr. Rufus Usher at Bodicote, near Banbury, where medicinal plants of several kinds were systematically cultivated. Among these were two forms of Henbane (*Hyoscyamus niger*), the forms being known respectively as annual and biennial. The latter, producing only a large tuft of spreading radical leaves during the first year, is the most valued for its medicinal properties, extract of Henbane being prepared from them. I remember being told at the time of my visit that the Henbane was a very uncertain plant in its mode of growth, as the seeds were often known to lie in the ground for some years before germinating. At this distance of time I do not remember the number of years that had been known to elapse, but other crops, like Potatoes, were often got off the land at intervals before the Henbane crop was realised. We all know how some people still stick to the story of the Mummy Pea, but between the Pea, the Henbane and Mr. Charles Comfort's plants there is a wide range of years, so that some reasonable conclusion may yet be arrived at.—JOHN R. JACKSON, *Claremont, Lympstone, Devon*.

Too-much-alike Auriculas.—There is no doubt that many of the Auriculas are too much alike, and "Taplow" is justified in calling attention to the matter. Here is a fine chance for the National Auricula Society to follow the Sweet Pea Society, and classify the various forms and let the cult know which are really distinct. Catalogues and lists are often bewildering to amateurs, while the professional gardener would be saved a lot of time and trouble if he was told which were similar. Many are not up to show form, although they may be good garden plants; it does not always follow that show plants are the best for general purposes. The following twelve would be useful, and produce a varied display in due season: Argus, Bluebell, Duke of York, Firefly, Rosy Morn, Uranie, Teviotdale, Thetis, The Bride, Mrs. H. Turner, Dazzle and Miss

Ashton. In a list before me they are quoted at 1s. and 1s. 6d. each, and flowering samples are sent out. There are other good and distinct kinds, but the price is accordingly higher, and this will be readily understood when I say that some Auriculas are very shy in producing offsets. Among the selfs are Buttercup, Mikado, Ruby, Favourite, Mrs. Phillips and Lord of Lorne. These average about 2s. each. Of the green-edged, Mrs. Henwood is among the best. George Lightbody, raised over fifty years ago, is still unsurpassed in the grey-edged, but the constitution is weak, and the short-pursed novices would do well to choose the cheaper George Rudd or Olympus. In the white-edged section, Acme and Heather Bell are recommended. The edged kinds are more expensive, and vary from 2s. to 10s. 6d., but those quoted are near the former figure. Whenever possible, it is best to select the plants in flower, either in the nursery or at one of the Auricula shows.—T. W. B.

Snapdragons for Winter.—I was interested in the description and comments in the issue of May 2, page 220, on the winter-flowering Snapdragon (*Antirrhinum*) Nelrose. There it was given under the varietal name Melrose, but that was an error. The note refers to the perpetual-blooming character of Nelrose, and says that this type is largely employed in the United States of America. These references are correct. Just after the Chrysanthemums begin to wane early in December—for the Americans do not want them later—one begins to see charming little basketfuls of Snapdragon. These are favourites right on until the Daffodils appear in quantity in April. The raiser of *Antirrhinum* Nelrose was F. W. Fletcher, of the firm of F. W. Fletcher and Co., Auburndale, Massachusetts, who began operations over fifteen years ago. At that time the majus varieties had poor flowers, sparsely set on the spikes, and there was a need of bright, clear colours. The first crosses, he tells me, were made with the best varieties then existing, followed later by the named sorts of *Antirrhinum nanum grandiflorum*. These later crosses gave the material Mr. Fletcher had been looking for, and though they were a very mixed crew, it was only a matter of selection from thousands of seedlings to get a strain that began to approach to the ideal of what a commercial *Antirrhinum* should be, i.e., one that would flourish indoors in winter and produce plenty of attractive cut blooms. So it was out of these cross-bred seedlings that Nelrose came, and four years ago Messrs. Fletcher had a sufficient stock to yield them commercial cut flowers. The colour is a rich silvery pink, and the flowers and spikes are large and handsome. Nelrose is equally good as a bedding plant, growing about twelve inches high out of doors—in America, at least. Every growth makes a flowering spike, so that if the plant is kept growing it must flower, summer and winter. I am pleased to say that Mr. Fletcher is of English descent, and was born in Massachusetts fifty-six years ago. He works on Mendelian lines in his hybridising and cross-breeding. Formerly he was editor of the *New England Florist*, since merged with the *Florists' Exchange*.—J. HARRISON DICK, *New York*.

FORTHCOMING EVENTS.

- June 13.—Stirling Horticultural Association: Outing to Greenfield, Alloa.
June 16.—Royal Horticultural Society's and National Gladiolus Society's Combined Show.
June 17.—Yorkshire Gala (three days).

"THE GARDEN" PLANNING AND PLANTING COMPETITION.

For the benefit of new readers we are publishing on page vii. the coupon to be sent for the outline plans in connection with our competition for planning and planting the little garden. In this competition we are offering cash prizes to the total value of £33 12s., as well as a number of book prizes, for the best designs for planning and planting the little garden. Full particulars will be sent to anyone who writes to the Editor for them and encloses 1½d. in stamps to cover cost and postage. All envelopes relating to this competition should be marked "Planning Competition" in the top left-hand corner. Replies to the numerous questions that have been sent in by intending competitors will be answered in our next issue. We would remind readers that there is no time limit for entering the competition, but completed designs must be delivered not later than September 1 next. We take this opportunity of thanking those readers who have so kindly written letters of appreciation concerning the competition.

UNCOMMON FLOWERS AND FOLIAGE FOR VASES.

THERE is a strange dislike to umbelliferous flowers for vase decorations. Sentiment, perhaps. One sometimes sees the compact-headed Masterwort used, but the much prettier loose-headed sorts scarcely ever, if at all. Some of these are not only pretty, but they are faintly, and sometimes strongly, aromatically perfumed, and the foliage of kinds not particularly desirable for their flowers is not to be despised. Of the latter, mention may be made of Spiguel, the leaves of which are elegantly cut, fragrant and very dark green. Sweet Cicely, which flowers as early as March, along with nice white flowers has scented, Fern-like foliage, and is sometimes known by the name of Sweet Fern.

One of the very prettiest, and which can be cut in long sprays with foliage and flowers, is the common garden Chervil. This is a recommendable vase flower, either for mixing with other kinds or for using alone, and it can be had from spring to late autumn. The common Cow Parsley, which succeeds Sweet Cicely, is also a valuable asset for certain purposes, but only for its flowers, which are not fragrant. The common Fennel and the Giant Fennels, with their greenish yellow flower-heads and finely divided foliage, are very useful later in the year, and the humble Carrot, whether in flower, in seed, or with the reddened leaves of autumn, affords splendid material for the decorator. *Selinum* (*Oreocome*) *Candollei* is an exotic species that can be recommended for large arrangements.

The only use I know for Bishopweed, that most determined colonist and almost ineradicable weed, is as a cut flower. It is really very handsome, and well worth working up with other early autumn blooms. It is scarcely necessary to mention the Eryngiums, which form exceptions to the vast number of umbelliferous flowers by their delightful colouring. What I specially desire is to draw attention to a vast fund of decorative material to a large extent ignored and neglected.

R. P. BROTHERSTON.

THE NEWER CHINESE RHODODENDRONS.

AMONG the almost countless number of new plants introduced during recent years from Central and Western China, new species of *Rhododendron* are very prominent. The Himalayas have, since the travels of Sir William Hooker, been regarded as the headquarters of the genus; but the exploration of China by Dr. Henry, Mr. E. H. Wilson, Mr. G. Forrest, and the three French missionaries, Les Abbés David, Delavay and Farges, has abundantly proved that Central and Western China must in future be regarded as the *Rhododendron* headquarters. Mr. E. H. Wilson during his four journeys collected over seventy species and several varieties. A number of these have been known to botanists and named from dried specimens for some time, but many are entirely new introductions. Some of those which have already flowered with us are valuable additions, though the *Rhododendron* already holds pride of place as our best evergreen flowering shrub. It is worth recording that nearly all Mr. Wilson's *Rhododendrons* are evergreen, a notable exception being the true *R. sinense*, around which and *R. mollis* considerable difference of opinion exists as to their being synonymous or distinct species. The rich yellow-flowered *R. sinense* seems to support the contention of nurserymen that our present-day race of garden Azaleas are hybrids between the yellow *R. sinense* and *R. mollis*, the type of which has apparently variable rosy pink blossoms.

The Chinese *Rhododendrons* represent a remarkable diversity of growth, foliage and flowers. A few extremes worth noting are *R. intricatum* and *R. fastigiatum*, alpine species less than 18 inches high, with leaves half an inch in length. Contrast these with *R. auriculatum*, a large bush or tree 30 feet high, with leaves 3 inches to 5 inches wide, and sometimes exceeding a foot in length.

Unfortunately, some of the newer species flower as early as March and April, also starting into growth while we are troubled with spring frosts. This means that, if possible, positions should be selected to plant them where they will be shaded from the early morning sun, so that, in the event of frost, the foliage can thaw gradually before the bright rays of the sun reach it. The places where we shall see those not suitable for general cultivation will, no doubt, be in the sunny South and West in company with the Himalayan species and hybrids. There is another interesting side to the value of these newer introductions in addition to their individual value for garden decoration, and that is for hybridising. Fame awaits the raiser of a perfectly hardy large flowered evergreen

yellow or blue flowered *Rhododendron*. Among the new species we have at least three with yellow flowers, *R. ambiguum*, *R. lutescens* and *R. flavidum*, while there is a lot of blue in *R. intricatum* and *R. fastigiatum*. A few particulars respecting the best of those which have flowered may prove of interest to readers.

***Rhododendron ambiguum*.**—A bushy plant with obovate, dark green leaves. The yellow flowers appear during April in small, terminal trusses. This species has, unfortunately, been put into commerce as *R. concinnum*, a species with purple flowers.

***R. Augustinii*.**—This is a most beautiful species, with evergreen oblong-lanceolate leaves

It is in the way of the beautiful *R. yunnanense*, but flowers rather early. The French missionaries sent seeds of this species to M. Maurice de Vilmorin.

***R. concinnum*,** the true purple-flowered species, gives promise of being a useful evergreen, and as it flowers during May, the blooms develop under much more favourable conditions. The flowers are 1½ inches to 2 inches across, and prettily spotted with reddish purple.

R. fastigiatum is a dainty little alpine species reaching a foot or rather more in height. The small, evergreen leaves are half an inch long; flowers lavender purple. It is allied to *R. intricatum*, but flowers nearly a month later, and has protruding stamens. This was, I believe, the first of Mr.

G. Forrest's *Rhododendrons* to flower in this country, which it did in 1912, eighteen months from the time of sowing the seeds. A. O.

(To be continued.)



FLOWERING SPRAY OF RHODODENDRON CHARTOPHYLLUM, A NEW CHINESE SPECIES.

and mauve, lavender or white flowers. The bushy plants are very free flowering. The seedlings exhibit considerable variation in the colour and size of the flowers, the best only of which must be selected for propagation. It is evidently fairly common in China, having been collected by Dr. Henry, Mr. E. H. Wilson and the French missionaries.

R. adenopodum is an April-flowering species, with pale rose-coloured flowers 2½ inches to 3 inches in diameter, first introduced to France by Abbé Farges and later by Mr. Wilson.

R. chartophyllum is an evergreen bushy species with white to lavender spotted flowers.

finest possible spray, and care must be taken that both sides of the leaves are thoroughly covered. This gentleman recommends liver of sulphur for the wash at a strength of one ounce in five gallons of water on the opening leaves, and subsequently one ounce in four gallons as the foliage hardens. With me this solution by itself does not seem to adhere to the leaves properly. It is apt to run into large drops, and I have found it better to mix a moderate amount of soft soap with it, which will give it the desired effect. Dr. Hamilton draws a close analogy between the chief causes of infection of the human body by disease and of Roses by mildew. From his deductions we learn that a wound on the surface

ROSE-GROWING IN TOWN GARDENS.

THE TREATMENT OF MILDEW.

ALL who have attempted to grow Roses in confined areas are familiar with the appearance of mildew, and most people are aware that it is caused by a minute fungus which spreads over the surface of the leaves and sends its roots into the cells, extracting the sap and causing the leaf to wither. It is important to realise that this fungus becomes visible only when it is bearing countless spores and is thus in a fair way to infect the whole Rose garden, as the wind will quickly distribute these spores among the rest of the plants. It is therefore only by taking preventive measures before the disease has actually appeared that we can hope to combat it effectually.

In the "Rose Annual" for 1914 the best methods for dealing with mildew are discussed in a series of interesting papers contributed by eminent rosarians, and the subject is one of particular interest to town gardeners. The advice of all tends in the same direction. Spray early and often is the rule, and, as Mr. M. A. Bailey points out, it is important to use a good syringe or machine capable of throwing the

of leaf or stem forms a point of danger, that weakly or overcrowded plants are especially subject to disease, and that over-watering the roots by lowering the vitality of a plant enables the mildew to obtain a firmer hold. We are counselled to keep the plants as clean as possible, not to overcrowd them, to fork over the surface of the beds frequently and to avoid wounds or abrasions. As regards the latter, Dr. Hamilton suggests that the plants should not be fingered, advice which is difficult to follow where green fly is a real trouble and time is limited; but when these insects are removed by hand it is certainly imperative to do it carefully, so that the surface of the leaf is not broken.

The Rev. F. Page-Roberts has found Jeyes' Horticultural Wash, Calvert's Carbolic Soap and Berger's Lime-Sulphur Solution all effective, as well as dark-coloured flowers of sulphur blown over the plants while the dew is on them, specially made bellows being used for this purpose.

Dr. A. R. Waddell created considerable interest last year by recommending the spraying of the plants with a solution of formaldehyde in the proportion of one teaspoonful to a gallon of water. He again advocates this strongly in his present paper, and gives interesting details of the results obtained by this treatment. It would appear, however, that the remedy is apt to be dangerous, for Mr. Page-Roberts contends that it is liable to burn the young growth, while Mr. Darlington has found it ineffective in treating mildew on Roses under glass.

One fact emerges from the discussion. As Dr. Hamilton points out, there are many remedies but there is no cure. Spores are ever present, awaiting favourable conditions in which to germinate, and only regular spraying will prevent the appearance of mildew. Another point made by the same writer is the importance of selecting hardy varieties. Very few Roses are actually immune from attack, and anyone wishing to grow a representative collection will hardly care to limit his choice to these; but if a particular variety has been badly infested, the wisest course is to get rid of it and replace it with plants of another kind.

P. L. GODDARD.

RAISING HERBACEOUS PERENNIALS FROM SEEDS.

IN every department of gardening there is wisdom and a certain fascination in the raising of plants from seeds, and that these extend into the region of hardy plant growing none will gainsay. The wisdom lies in the obtaining of one's "pound of flesh," so to speak. It may be one hundred or five times that number of seeds for a shilling, and if only a fourth part of the first-named number vegetate and make good plants, the expenditure might still be considered good and economical. The fascinating side of the subject—it is full of interest and moment to even the most advanced horticulturists—is that one never quite knows what is coming. We know, of course, that we have purchased seeds of *Aubrietia*, *Gaillardia*, *Carnation* or *Delphinium*, and committed them to the earth in "sure and certain hope," though we cannot even guess what their "resurrection" will be. In other words, while there will be the usual array of ordinary seedlings, and some—the weeds—that might be regarded as extraordinary, there is also just the possibility—often the probability—of some others being extraordinarily good.

The Small Seedlings.—What is lost in the discarding of the small seedling plants no one ever knows, yet they are worthy of our closest attention. Frequently—I had almost said invariably—the small seedling plant, the slow grower at the start, is often of superior quality, and should be catered for accordingly. Yet too often these are discarded by the careless or thoughtless worker at the time of pricking off because they are less easy to handle. I once caught red-handed an assistant, who for days had been trusted with the pricking off of a fine strain of tuberous *Begonias*, throwing under the potting-bench a whole host of the smaller seedlings, the stronger growers, the second and third rate flowers, probably coming readier to his hand. A cursory examination of his past work revealed the fact that there were no very small seedlings pricked off; hence one could only guess at the loss. Naturally, the pricking off of the smallest seedlings constitutes the more tedious part of the work; but good things were ever wrapped up in small parcels, and it is in these tinier specks of vegetable life that the good things are usually found.

The Seed-Bed.—At this season of the year, seeing that the object of sowing now is to obtain large plants for flowering a year hence, the seed-bed should be formed in the open and in a partially shaded position. The plot of ground should be clean, well tilled, finely broken up and raked down as evenly as possible. Where light soils obtain, this will prove quite easy. Where the soil is heavy or of a more lumpy as well as stony nature, greater preparation will be required. In such a case a fine surface may be formed by raking off the stones, by the addition of finely sifted soil or even a little *Cocanut* fibre refuse. By the aid of a few boards and a spare frame-light a bed can be so

formed that birds and other animal life can be kept at bay. A thinly shaded frame-light or one darkened by mats, while performing the above-named function, conserves moisture, also hastens and ensures a more uniform vegetation of the seeds. These are important. Should the seeds be sown in a fixed frame, see to it that the surface of the seed-bed is quite flat and not at the same inclined angle as the frame, which runs all the water to the lowest point.

Sowing the Seeds.—The only rational way is that of sowing in drills, arranging these at 9 inches apart. By these means hoeing, thinning and weeding are easily performed, whereas, on the broadcast seed-sowing system, weeding is less easy and hoeing impracticable. The best way to form the drills is to provide an inch wide board and press it into the soil half an inch or so deep. In this way the drill and the straight line are forthcoming by one and the same process. For the covering, a little fine soil with *Cocanut* fibre will do quite well. Each variety or kind should be labelled as sown, and the whole gently watered when the work is completed. Thin sowing of the seeds is a point so often urged that it might appear superfluous to repeat it. Yet it is of the highest importance. The operator should remember, too, that large seeds may be safely buried an inch deep, while the smallest—those approximating to dust-like particles—will be better with little or no soil covering at all. Even *Polyanthus* seed, neither notoriously small and certainly not large, is best with little covering up, and, like others, is quite content with the shelter the interstices of the soil afford. Subjoined is a list of plants—by no means exhaustive—that may be sown at the present time, with hints as to soil and other matters which I hope may prove helpful to the general reader.

Name.	Colour.	Soil.	Time of Flowering.	Height in feet.
<i>Achillea alpina</i>	White	Ordinary	July	2
<i>Aconitum Wilsonii</i>	Deep blue	"	September, October ..	5-6
<i>Adonis amurensis</i>	Yellow	Sandy loam	March	1
<i>vernalis</i>	"	"	March, April	1
<i>Anchusa italica</i> Dropmore var.	Rich blue	Ordinary	June, July	4-6
" Opal	Cambridge blue	"	"	4-6
<i>Anthriscum Liliastrium major</i>	White	Sandy loam	May, June	2
<i>Aquilegia chrysantha</i>	Yellow	Loam	June, July	3-4
" <i>cærulea</i> hybrids	Scarlet, yellow, cream ..	Ordinary	July, August	2-3
" <i>Skinneri</i>	Scarlet	"	"	2
<i>Aster Amellus</i> in variety	Violet, &c.	Light loam	August, September ..	2
<i>Campanula carpatia</i>	Blue	Ordinary	"	2
" <i>alba</i>	White	"	"	2
" <i>Riveralea</i>	Deep blue	"	"	1
" <i>persicifolia</i> in variety ..	Blue and white	Cool loam	June, July	2½
" <i>Van Houttei</i>	Light blue	Sandy loam	July, August	2½
<i>Centaurea montana rubra</i>	Red	Ordinary	June, July	2
<i>Chelone barbata</i> var.	Scarlet	Sandy loam	July-September	4
<i>Delphinium</i> (good strain)	Violet and blue	Rich loam	June, July	4-6
<i>Eryngium amethystinum</i>	Blue	Ordinary	July, August	3
<i>Gaillardia</i> in variety	Crimson and gold	Light loam	"	3
<i>Galega officinalis alba</i>	White	Ordinary	"	4
" <i>His Majesty</i>	Blue and white	"	"	4
<i>Geum coccineum plenum</i>	Scarlet	"	June	2
<i>Heuchera</i> in variety	Scarlet and pink	Light loam	June, August	2½
<i>Incarvillea belavayi</i>	Rose magenta	Rich loam	June	3
<i>Kimphofas</i> of sorts	Scarlet, &c.	Deep loam	August-October	3-6
<i>Lathyrus latifolius</i>	Rose	Ordinary	July-September	6-8
" <i>alba</i>	White	"	"	6-8
" <i>The Pearl</i>	"	"	"	6-8
<i>Liatris graminifolia dubia</i>	Rose purple	Deep loam	August	5-6
<i>Lycoris chalcidonica</i>	Scarlet	Rich soil	July, August	3
<i>Lupinus</i> of sorts	Blue, rose, white	Ordinary	June, July	3-4
<i>Papaver orientale</i> in variety	Crimson to orange	"	"	2-4
<i>nudicaule</i> in three colours ..	Orange, scarlet, &c.	Light soils	"	1½
<i>Pyrethrum</i> , single var.	Various	Rich light soils ..	June	2
<i>Primula japonica</i>	Crimson	Rich moist soils ..	May, June	2
" <i>alba</i>	Whitish	"	"	2
" <i>pulcherrima</i>	Crimson	"	June, July	2-4
" <i>denticulata</i> in variety	White and lavender	"	April, May	1½
<i>Scabiosa caucasica</i>	Mauve blue	Rich light soils ..	July, August	3
" <i>alba</i>	White	"	"	3
<i>Statice latifolia</i>	Blue	Light soils	August, September ..	2
<i>Thalictrum aquilegifolium</i>	Creamy	Good loam	June, July	2½
" <i>album</i>	White	"	"	2½
" <i>purpureum</i>	Purplish	"	"	2½
<i>Trollius</i> , any varieties	Yellow and orange	Moist loam	June	2
<i>Verbascum</i> of sorts	Various	Light soils	Summer	2-6
<i>Violas</i> of sorts	"	Rich soils	Spring and summer ..	1
<i>Zauschneria californica</i>	Scarlet	Light soil	Autumn	1

E. H. JENKINS.

SWEET PEA NOTES.

Here are Sweet Peas on tip-toe for a flight
With wings of gentle flush o'er delicate white,
And taper fingers catching at all things,
To bind them all about with tiny wings.

WITH joy we proclaim the arrival of the Queen of Annuals. As anticipated, the Chelsea Show produced some notable exhibits of Sweet Peas, of which a detailed account was given in

the Special Chelsea Show Number of THE GARDEN. The brilliant sunny weather and the quality of the blossoms made it difficult to remember that it was not the Holland House Show. Such fine displays of exquisite flowers should give a fillip to the culture of Sweet Peas under glass, and every Sweet Pea lover possessing a light, airy house will find they amply repay all the care bestowed upon them.

Sweet Peas Under Glass.—

Continue to give as much air as possible, and where a picking of flowers has been made, the plants will benefit by applications of liquid manure. As previously mentioned, start with weak soot-water, and, personally, I think this should form the principal liquid used, as it cannot do any harm. A plan I have found most beneficial is to give a good top-dressing (a fair sprinkling) of Dobbie's Sweet Pea Manure or Ichthemic Guano or Clay's Fertilizer, and then a mulching with spent Hops, watering with clear water, with occasional doses of weak soot-water. It is essential that the plants are not allowed to become dry, and the mulching materially prevents this, the Hops being clean and less unsightly than anything else. Whether the fertiliser be used or not, the mulching is absolutely necessary. If liquid manure be relied upon, I recommend that a watering of soot-water be followed after four or five days by an application of superphosphate at the rate of 2oz. to three gallons of water. The next watering of alternate clean and soot water might be followed by one of liquid manure made from cow-manure or farmyard manure, and should be well diluted. It is well to err on the side of over-dilution rather than risk the loss of plants through an extra strong mixture. "A little and often" is an absolutely satisfactory cultural maxim when giving liquid food. An occasional watering with phosphate of potash (half an ounce to a gallon of water) together with the foregoing will keep the plants in good condition for many weeks.

Disbudding.—All the side shoots must be kept rubbed out and no seed-pods allowed to form, and it is well to cut the blooms as soon as they

are fully out and commencing to show the seed-pods. By this means the strength of the plant is not wasted, and the succession of flowers is assured.

Outdoor Culture.—The weather conditions have been most uncongenial, and many growers are complaining of stunted growths and disappointed hopes. The stunted growths and the yellowing of the leaves are due to the very dry weather and bitterly cold nights we have recently experienced. Given moister conditions, they will quickly recover and make headway. Sandy,

All refractory shoots must be tied in, and where exhibition blooms are required, a thinning out may be necessary.

Thin Growths.—Vigorous growths in the majority of cases at present are conspicuous by their absence, and I have noticed that several growers have resorted to an early use of chemicals. This is really folly. In many instances the plants were impoverished through a prolonged stay in pots or boxes, and the drought has further checked them. The chemical is lying unused, and is therefore thus far wasted. A thorough watering, followed by frequent syringings, will be of more benefit than any manure. As I have so frequently stated, the chemical manures are most useful as an extra stimulant when the plants are in active growth, and I prefer to see the haulm strong and vigorous before an application of any concentrated fertiliser be made. If the drought continues, give frequent waterings, and try to create a sturdy growth by picking off all flower-buds that are prematurely forming.

Question of Scent.—I have read with considerable interest the letters that have recently appeared in the "Correspondence" columns of THE GARDEN bemoaning the loss of scent. Is it really so? Are we not under a delusion when we say a certain Sweet Pea has more scent than another? That some varieties are more fragrant than others we all agree, but an interesting experiment convinced me that our sense of smell is not to be depended upon entirely, any more than the sense of feeling. Probably most readers know that if one hand be placed in very hot water and the other in ice cold water, then both plunged together into lukewarm water, that one hand will declare the water hot and the other cold. A similar experiment was tried on a grower who most vehemently affirmed that the Spencer type lacked fragrance. He was blindfolded and a spray of Sunproof Crimson was given him. He said it was most fragrant. It was taken away and given him again, and this time he affirmed it had no perfume. Again and again the same flower was substituted for others, and after the first time it was declared to be lacking in



THE MOUNTAIN CLEMATIS, C. MONTANA, OVER A COTTAGE DOORWAY IN SURREY.

porous soils have specially shown dire results of the drought, and watering is absolutely essential. Where mulching with short, well-decayed manure or lawn mowings has been applied, the loss of moisture has not been so pronounced, and a constant use of the hoe in many instances has done much to mitigate the evils of the drought.

Tying.—Where growth is fairly rampant and vigorous, an almost daily survey is necessary.

Dorothy Eckford and Lady G. Hamilton were also similarly tested, and great was the surprise of the person, when his eyes were unbound, at the opinions he had given. Personally, I have tested the power of judging scent in other flowers by the same experiment, and my conclusion is that the sense of smell is not sufficiently reliable to notice accurately the difference in degrees of fragrance. It is quite possible for many varieties to have been raised from parent flowers with little

fragrance, as many raisers have striven for colour and form only, and it would be a great loss if the new Sweet Peas lacked the well-known and approved fragrance; but, on the other hand, it is unfair and unwise to condemn all Spencer Sweet Peas as odourless. S. M. CROW.

THE MOUNTAIN CLEMATIS.

CONSIDERING the ease with which *Clematis montana* will grow in almost any part of the country, one might almost imagine it to be a native of Britain, instead of which it was introduced from Nepal in 1831. Our illustration shows this *Clematis* effectively growing over a cottage porchway in the village of Clandon in Surrey, in which neighbourhood *Clematis montana* may be seen growing over balconies, walls, and even barns, flowering with great freedom. It is also to be seen rambling at will over Pine trees, the light star-like flowers being shown up to great advantage against the dark background of coniferous trees. It is indeed a beautiful subject and of very easy culture. *Clematis montana* does best in a hot sunny position, a south wall for preference, although it is often recommended for a north wall. If given a sunny position the wood is well ripened and the chance of a fine display of flowers the following year is greatly enhanced. Pruning ought to be done soon after flowering, when the weak growth should be cut clean away. This beautiful climber is not in the least fastidious about soil, but it appreciates one of a light nature and a plentiful addition of lime.

A WALL GARDEN IN DEVON.

IN case any of your readers are interested in wall gardening, I am sending you a photograph of a dry wall we have made here. It forms the retaining wall to the lawn, and is 180 feet long and faces due south. The first half of it was built in the autumn of 1911, and the second half, which is shown in the photograph, in September, 1912. The stone is from a local quarry, and was used exactly as it was quarried. The soil used for filling at the back was good garden loam, with bone-meal mixed with it. Most of the plants were put in the wall when it was being made, but many small ones have since been added. From the first the plants have all thriven in a remarkable way, and we have no trouble in the wall during wet winters with any of the *Dianthi*, *Asperula suberosa*, *Acantholimon venustum*, *Androsace lanuginosa*, *A. pyrenaica*, *Potentilla nitida* and *Wahlenbergia Pumilio*.

Among the many other things doing well may be mentioned *Aquilegia cærulea*, *A. Stuartii*, *A. glandulosa*, *Anemone sylvestris grandiflora*, *Iris pumila atrocærulea*, *I. azurea*, *I. cærulea*, *I. lutea*, *I. cristata*, *Zauschneria californica* (which

flowers regularly), *Symphyandra pendula*, *Statice minuta*, *Silene Elizabethæ*, *Saxifraga pyramidalis*, *S. longifolia*, *S. Salomonii*, *S. lantoscana lingulata*, *S. burseriana Gloria*, *Rosmarinus prostrata*, *Plumbago Larpentæ*, *Onosma alba rosea*, *Oenothera brachycarpa*, *Æ. ovata*, *Æ. W. Cuthbertson*, *Æ. Youngii*, *Mazus repens*, *Lithospermum Froebellii*, *L. prostratum*, *L. Heavenly Blue*, *L. rosmarinifolium*, *L. Zollinsieri*, *Hieracium villosum*, *Globularia nana*, *Dianthus alpinus*, *D. neglectus*, *D. cæsius*, *D. arvernense*, *Cytisus Ardoinei*, *Corydalis Wilsonii*, *Convolvulus Cneorum*, *C. althæoides*, *C. mauritanicus*, *Campanula Stevenii*, *C. turbinata*, *C. garganica hirsuta* and *C. Miss Willmott*, besides all the larger kinds of wall plants, including *Aubrietia H. Marshall*, *A. Lloyd Edwards*, *A. Fire King*, *A. Dr. Mules*, *A. Lavender*, *Helianthemum Fireball*, *H. venustum*, *H. Beauty* and *H. Rhodanthe carneum*.



AN INTERESTING WALL GARDEN IN DEVONSHIRE.

At the foot of the wall are many kinds of bulbs, including Tulip species, *Habranthus pratensis*, *Tritonia crocata*, *Sparaxis Tollens*, *S. Fire King*, *S. Constance*, *S. sulphurea*, *S. Judith* and *Ixia Fire King*. *Watsonia Ardernei* (which flowers splendidly and has not been lifted or covered for three years), *Iris juncea*, *I. filifolia*, *Anemone nemerosa Blue Bonnet* and *A. Allenii* do well in the partial shade of other plants.

This short list does not give one quarter of the plants growing in the wall, but it is enough to show that many of the plants that are doubtful in this erratic climate are very happy in a dry wall, where their roots are always cool and in perfect drainage, and their heads in every bit of sun that we may be lucky enough to get.

E. A. FROUDE.

Collapit Creek, Kingsbridge, South Devon.

TULIP AFTERMATH.

TULIPA SPRENGERI is in full bloom, which is only another way of saying that the curtain has been rung down and that the end of Tulip-time has come. This seems to be a convenient season to write about one or two matters of interest in connection with this flower.

Rise in Prices.—It will be news to many to be told that during the month of May there has been a miniature mania in Holland over late Tulips, more especially the deep rich purple and the brownish yellow shades. The *Gladiolus gamble* of last year seems to have whetted the Dutchmen's appetite for speculative dealings, and now, when it is believed, and I may say I think with good reason (see an article by Mrs. Francis King in

the *Garden Magazine* of New York for May, 1914, an extract from which is given at the end of this article), that America is waking up to the immense possibilities of Tulips, they are at it again. Old Haarlem must rub her eyes when she hears the doings of the Monday meetings in the Bulb Market, and wonder if the famous times of 1635 and 1636 and 1637 are about to be repeated. I am afraid we shall feel the result in increased prices in many of the very best varieties. The most startling rise is in that beautiful blue purple, The Bishop. Mr. Bourne's price in 1913 was 5s. per dozen; in his preliminary list for 1914, which I picked up at Chelsea, it is put down at 30s. Louis XIV., Viking, Jubilee, Frans Hals and such as Dom Pedro, Ronald Gunn, Mrs. Kerrell and Norham Beauty have all appreciated in value. Nor have Gondvink, Clio, Golden Bronze, Quaintness, Goldmine or Coridion (all brownish yellows) fallen.

There is one compensation, however. The flood gates that held back Clara Butt have at last been opened, and this once expensive gem is now a possibility for the man of moderate means.

Tulip Pluriflores.—Messrs. James Carter and Co. distributed the only one of this new French race which is in commerce last autumn—Mons. S. Mottet. I am wondering what their customers thought of it. I have had a fine bed in my own garden from *home-grown bulbs*. There was plenty of branching, four and five flowers on a stem being common, with two as a minimum and seven as a maximum. Then, the petals are adhesive. As the only hundred year old parishioner that I have ever had said to me in his one hundred and first year: "I aint given to dying," so the flowers of Mons. S. Mottet say: "We aint given to falling." *Last*, they certainly do. This gives them ample time to appear in a new dress, for they are none of your lightning change artists, but require a considerable time to put off their white and don their pretty rose costume. These branching Tulips *must* be "well done to," or they will not branch. If in any year they do not do so, then, immediately this failing is seen, feed them. Again, only the large-sized bulbs will branch. These are the two secrets of success, without which failure is certain. One must have a nursery bed in which to grow them on and feed them. With this adjunct all difficulties vanish. They are worth it; a large bed is a pleasing sight and a *very* uncommon one.

Early Flowering Novelties in Pots.

I believe I have found the very best pure white in commerce, if not in existence—White Beauty. It is a sport from that grand variety, Pink Beauty. To show how much alike the two are in habit and shape of flower, my gardener, without knowing its true history, "spotted" its origin. Those who know Pink Beauty will need no further recommendation beyond my saying "It is a chip of the old block." Another superb novelty is the glorious reddish orange De Wet. I am told it is a sport from that best of all Tulips, Prince of Austria. In this case, too, the chip is fully as good as the old block. I have grown De Wet in pots and also in the open, and in both circumstances it has proved itself highly satisfactory. I have to thank my good friend Mrs. Polman Mooy of Haarlem for many things, for making me Govda syrup-wafers for one thing, but for none more than for being the unintentional reintroducer of De Wet. She took her husband and myself to a Woman's Work Exhibition at Amsterdam last year, and there, decorating a prettily furnished sitting-room, were vases galore, of this, both to the "Heer" and myself, unknown flower. It looks so different to what it did at the Jubilee Exhibition that, although we had stood together before it there, neither of us recognised it now. The fact is, it changes with age. Whereas in early life the orange tone predominates, in later life it is the red. Visitors, one and all, to my garden have asked: "Where *can* I get it?" I really do not know who lists it, but as I am told the wholesale vendors, Messrs. M. van Waveren and Sons of Hillegom, are

sold out for this season, somebody must. It is the most notable "early flowering" introduction of recent years. A third novelty, which is also a sport, coming as it does from Cottage Maid, is Jeanette. It is unlike any other early Tulip in colour, being a sort of rich cerise crimson, edged deep pink. It is a long flower and the edges of the petals are a little laciniated. I am in two minds about it. I like its colour very much, but somehow there is something about its general look that I do not care for; but I am going to try it again; it is such a decided novelty. It has one recommendation—it is quite cheap compared with De Wet—hence I advise a trial.

Extract from "Notes Among the Flowers of May," by Mrs. Francis King: "Let me suggest



REGELIO-CYCLUS IRIS 'MARS.' THIS IS ONE OF A BEAUTIFUL NEW RACE DESCRIBED ON THIS PAGE.

to those who do not yet know the newer Darwins, Cottage Tulips, Breeders and Rembrandts an investment in a few bulbs next fall, if only a half dozen of each of some of the finer varieties, and see each for himself the wonders of these flowers. In the first three classes, if I were to choose four out of each as introductory lists, they should be these: Cottage or May-flowering Tulips—*Retroflexa superba*, Moonlight, The Fawn, Inglescombe Pink. Darwins—Clara Butt, Rev. H. Ewbank, Gudin and Euphrosyne. Breeders—Coridion, Golden Bronze and Louis XIV. . . . Would that I might have named Zomerschoon in the Cottage group—Zomerschoon, that too costly Tulip of unforgettable beauty." J. J.

REGELIO-CYCLUS IRISES.

THERE is often a certain negative similarity between the result of going to an auction sale of the contents of some well-known house and a large flower show such as Chelsea, or even the usual fortnightly shows of the Royal Horticultural Society. In the first case we find ourselves landed with what we do not want, and in the second with what we cannot grow. Surely few can say, "It has never been so with me." Maybe the Oncocyclus and Regelia

Irises have been the snare. For example, *susiana*, one of the best known, is not infrequently exhibited in London. It always has a certain strange fascination for me, but I seem to have a stronger will at shows than I do at sales, and so far neither *susiana*, nor *Gatesii*, nor *Lortetii*, nor *Korolkowii* has induced me to buy. I am told, however, that there is a sort of halfway house between the easy "Germans" and the impossible "Cushions," namely, a certain weirdly named strain raised by the great hybridising firm of C. G. van Tubergen of Haarlem and named *Regelio-cyclus* Iris. These (and the statement has the *imprimatur* of Dykes—"Iris," in "Present-day Gardening," page 28) are at least possibles if treated as advised by the aforesaid firm. I believe, to do them well, cold-frame culture, with the plants in the soil, is by far the best way to manage them. The difficulty is to prevent autumn growth, and to keep any that may come from the vicissitudes of winter and early spring. I saw the beautiful series of hybrids at the Royal Horticultural Society's show on May 5, and since then I have had a boxful of their charming refined flowers sent from Haarlem. They had been gathered in the bud, then stretched and tied to a rack of comfort, so that they reached me just opening, and a few hours in water gave me the pleasure of seeing for the first time in my own house living specimens of some of the best of this fairly amenable race. I should say that Mr. Thomas Hoog (nephew of the respected head of the firm, Mr. C. G. van Tubergen, jun.) had told me that if I followed his directions, he did not see why I should not succeed. That box did it. I am going to make the attempt to grow a few of them next season, and I have picked out three from those

sent which are quite distinct from one another and which are (each one) very beautiful. *Hecate* (a study in brown and grey), *Mars* (a blue-blooded beauty) and *Psyche* (a sort of combination of the two, with bluish standards and brownish falls) are the ones I hope to start with, and the first two are among the cheaper ones. A fourth, which is distinct, being of a sort of pale wine red colour, is *Hera*. I hope to include this too; and to make up half a dozen I am making a plunge from the descriptions in the catalogue, and am going for *Irene*, "a very chaste flower of a silvery white with chocolate brown veins," and *Medusa*, "deep violet, veined on a violet blue ground." JOSEPH JACOB.

GARDENING FOR BEGINNERS.

CUCUMBERS AND TOMATOES IN FRAMES: A USE FOR THE COLD FRAME IN THE SUMMER.

WHILE during winter and spring the cold frames are taxed to the utmost of their holding capacity, in the summer as a rule they are very little used. Among the numerous purposes for which the cold frame is adapted in the summer is the cultivation of Cucumbers and Tomatoes. These are welcome in most houses, and, as with most other home-grown produce, are doubly so when freshly cut from one's own garden.

The Frame Cucumber.—Though comparatively few amateur gardeners attempt the cultivation of Cucumber plants, they are really very easy to grow. To provide heat in the frame during the early stages of the growth of the plants, a hot-bed of manure and leaves should be made up. For a two-light frame not less than two loads of fresh straw manure and one load of leaves will be required. Get this together a fortnight in advance, mix it up thoroughly several times, watering if dry. Make up the bed 18 inches wider and longer than the frame, and about two feet deep. Tread firmly, stand the frame in position on the bed, and place in the middle of each light a mound of nice fibrous loamy soil. As fermentation of the manure proceeds, there will be a certain amount of steam in the frame, which must be allowed to escape by leaving a crack for ventilation. In from a week to ten days the frame will be ready for the Cucumber plants. It is as well to raise these in the greenhouse, sowing the seeds in pots about a month before it is proposed to plant them in the frame. This may be done at any convenient time from April to the end of June. Sow two seeds in a 3½-inch pot. If

both germinate, pull out the weaker one. When growing freely, move into 6-inch pots, so that good, sturdy plants will be available when the frame is ready. Would-be growers of Cucumbers who have no greenhouse should plant the seeds straight in the soil of the frame. The plants will grow quite as well, the only difference being that they will be a month later. Two plants are sufficient in each light of an ordinary frame. Three are shown in the illustration, one extra being put in in case of loss. Should all thrive well, it is far easier to pull one out than to put another in. Cucumber plants revel in a moist heat. In the morning and afternoon syringe with tepid water, unless a cold, wet period is experienced, when once a day will be ample. This will keep the soil fairly moist, but probably the roots will require an additional watering about once a week. Shade the plants from hot sun, damping down, syringing and closing



CUCUMBERS IN A COLD FRAME. IF ALL GROW WELL ONE WILL BE REMOVED LATER.

Rochford's Market, and Cluster (a free-fruited small variety).

Tomatoes.—During favourable summers Tomatoes produce a good crop of fruits outside, particularly when planted against a sunny south wall or fence. To supplement these a few plants should be cultivated in frames, as illustrated. Grown under glass in this way, the fruits ripen a month earlier, and as a rule the crop is heavier and of better quality. This is especially pronounced when there is not an excessive amount of warm, sunny weather during July and August to help the outdoor plants. A two-light frame will take six plants, three in each light. Plant these at the bottom 1 foot to 15 inches apart, with the growths leaning to the top of the frame. If the slope of the frame is not fairly steep, it should be raised a foot at the back by placing bricks under the woodwork on the ground. Air admitted here will do no harm; in fact, if anything it will be beneficial. Strain stout string or wire on hooks from the top to the bottom of the frame, one strand for each plant, as illustrated. Restrict each plant to a single stem, removing all side shoots, and regularly tie the leader to the string, or the top will be constantly touching the glass. Grow the plants entirely without shading the lights. Nothing is more liable to prevent the free setting of the flowers than heavy shading. Mulch the plants when growth is proceeding satisfactorily, and attend regularly to watering. Useful sorts to cultivate in frames are Early Market, Holmes' Supreme, Sunrise and Duke of York.

In the illustration it will be noticed that there are also Lettuces growing in the frame with the Tomatoes. A crop such as this can be very well grown in the frame while the Tomatoes are small, but they must, of course, be removed before the latter get so large as to obscure the light.



TOMATOES PLANTED IN A COLD FRAME, WITH YOUNG LETTUCES GROWING UNDERNEATH.

up about the middle of the afternoon to shut in some of the sun-heat. As soon as the young plants have made four or five leaves, take out the growing tips to encourage branching shoots. Spread these evenly over the ground, stopping again at intervals as growth proceeds. From time to time it will be necessary to remove some of the older leaves, and probably shoots also, as crowded plants are by no means the most fruitful, but rather the opposite. Regarding good sorts to grow in a frame, choice may be made from Reliance (the one illustrated, which fruits very early), Telegraph,

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Strawberries.—Now that Strawberry forcing is over, it is necessary to make preparation for next season's crop, and, assuming that a plantation was made in the autumn with a view to supplying early runners, there should be no difficulty now in finding sufficient for the early batch of plants, and these ought to be inserted in small, clean pots with as little delay as possible. Good rich loam should be used, and the pots may be half plunged in the soil between the rows of plants in order to reduce the need of frequent watering.

Melons in Frames.—These should now be making rapid progress and ought to be kept well thinned. Remove worthless growth from plants which are setting their fruits, and attend to the pollination of these every morning as soon as flowers and foliage are dry. As soon as a full crop has been secured, the shoots may be stopped at the first or second joint beyond the fruit, according to the space available, and a good soaking of clear water given. When the fruits are swelling freely, they may be placed on small inverted pots in order to expose them to the light, and also as a protection from insects. Syringe the plants freely on fine mornings, but avoid damping the foliage on dull days. A stagnant atmosphere must always be avoided. As the season advances and fruits are swelling freely, the plants should be assisted by liquid manure in some form, which must be kept quite clear of the stems. Further plantations ought to be made and seeds sown for succession.

Plants Under Glass.

Zonal Pelargoniums.—Plants which are intended for flowering in autumn and winter should now be ready for potting into 6-inch pots. Place them in a cool pit quite near the glass, and when they have become established they must be freely ventilated, and afterwards removed to the open and placed on a bed of ashes. Pinch the strongest shoots as it becomes necessary to keep the plants in shape. The most suitable soil for this purpose is good rich loam with a sprinkling of old lime rubble. A few crushed bones may be placed over the crocks with advantage.

Heliotrope.—This is a useful plant for the conservatory during the autumn, and for this purpose young plants which were rooted in the autumn or spring may be potted and grown on in a cool, well-ventilated pit. Pinch the strongest shoots to keep the plants in shape. The soil may consist of two-thirds turfy loam and one-third leaf-soil, which should be made moderately firm.

Tuberous Begonias.—These plants will now be making rapid progress in their flowering pots, and must be carefully staked in order to secure the maximum amount of light among the shoots. Seedling plants in pots should be potted on as soon as ready, so that the best may be selected for pot culture next season.

Chrysanthemums.—The final potting should be accomplished with as little delay as possible. Stand the plants in some open quarter in order to prevent them from becoming drawn. As soon as the pots are well filled with roots, some stimulant should be applied several times weekly.

Fuchsias for autumn flowering may be grown in any cool structure. Water freely with liquid manure as soon as the plants are established, and pinch side shoots as it becomes necessary to keep them in shape.

The Flower Garden.

Summer-Flowering Chrysanthemums.—These are growing freely, and should be carefully staked before growth is too far advanced. Thin the shoots to five or six on each plant, and stake separately, allowing sufficient space between them to admit plenty of light and air. Water freely during dry weather, and hoe the soil between the plants at frequent intervals.

Summer Bedding.—To encourage free growth among plants which have recently been bedded out, the syringe should be used each evening and the beds watered at frequent intervals. Stake

the plants as early as possible, and, as many of them will require pegging down to the ground, this should also be accomplished as soon as possible. Verbenas, Petunias and Ivy-leaved Pelargoniums are among the first to require attention.

Planting Dahlias.—There must be no delay in planting and staking Dahlias in the case of spring-struck plants with single stems. A careful watch should be kept for slugs, which will soon destroy young plants. Every effort ought to be made to complete the planting of all tender subjects as quickly as possible, so that they may not become stunted before they are put out.

The Kitchen Garden.

Mushrooms.—Beds may now be made up behind a north wall or in a shed facing east for the supply of Mushrooms during September and October. Let the material be well prepared and trodden tightly together to the depth of 2 feet, in order to retain the heat as long as possible after spawning, which should take place when the temperature of the bed is as near 80° as possible. After a few days, when the heat is inclined to drop, a covering of long litter may be placed over the surface to prevent evaporation.

Runner Beans.—A second sowing may be made now in order to keep up a supply as far into the autumn as possible. Stake the plants as soon as sufficiently advanced, and give a liberal supply of water during the summer months.

Lettuce.—Make frequent small sowings of Lettuce seed, and transplant some of the seedlings as soon as large enough. By this means a continual supply may be available through the summer. A cool situation should be chosen for the next few sowings, and if the soil is of a heavy nature, so much the better. If dry weather prevails, frequent waterings will be necessary. Small sowings of Endive may also be made and treated in the same way as Lettuce.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Cauliflowers.—Make another small sowing of these to keep up a succession to those sown in March. To many this might be thought to be much too late, yet it is astonishing what useful heads can be had from this sowing. As it is necessary to keep up the supply, sow Early London, Walcheren and a little seed of Autumn Giant. In consequence of the extremely cold weather experienced in many places in May, a good many of those planted earlier may have buttoned. Go over the plot and make up the blanks from the seed-bed.

Leeks.—The most forward plants will now be ready for planting, and as these are gross feeders and cannot very well be fed from the surface, it is essential that the ground be well manured before planting. Rake the ground quite fine and make holes 9 inches apart and 15 inches between the rows. Many growers cut off the tops of the leaves before planting, averring that it greatly strengthens the roots; but for ordinary purposes it seems to me to be immaterial whether they are cut or not.

Cucumbers.—Now that most of the frames will be empty, a few plants may be put in as advised some weeks ago. After planting, keep the frames fairly close for a time, and throw a mat over them during the hottest part of the day. By all means guard against cold winds and draughts, and supply abundance of moisture during the earlier stages of growth.

The Flower Garden.

Roses.—Among the various sections of Roses, perhaps the present time will be the most interesting and possibly the most anxious. The Tea-scented varieties growing against walls will, in many cases, have suffered rather severely from the attacks by aphids during the unusually cold spell in May. At that season the foliage is more susceptible to injury than at any period of their growth. When the foliage appears curled, there is no doubt that the maggot has got a footing, and hand picking will be out of the question.

Syringe the bushes with Quassia Extract or other approved insecticide to prevent it spreading, and, being against a wall, it is more than likely they will require moisture at the roots. Among Roses of recent introduction, which, in the majority of cases, are rather weak, it will be advisable to pinch out the earliest flower-buds, which will have the effect of throwing vigour into the plant.

Spring-Flowering Plants.—Those plants that were used for spring bedding, such as single and double Arabis, Polyanthus, Aubrietias and Daisies, must be attended to at once, as very frequently they have to be moved to make room for the summer occupants before they have completed their growth. They should be divided and planted in nursery lines to make stock for next season's supply, and, should the weather be dry, an occasional watering will be necessary. Such plants as Myosotis and Alyssum saxatile are best grown from seed, and may be sown now.

Herbaceous Plants.—These will now require constant attention in the way of staking and tying, and some of the most delicate sorts, such as Ostrowskia, Scabiosa caucasica and many others that are subject to attacks from slugs, should have the soil stirred round them and be given a dusting of soot. See that the stronger-growing sorts are not allowed to encroach on the weaker-growing plants; each plant should stand out distinctly.

Plants Under Glass.

Stove and Greenhouse Climbers.—Most of these are growing luxuriantly and must, to a certain extent, be held in check. In thinning and tying and otherwise regulating the long growths, regard must be had to the particular plant in hand; weakly shoots should be removed and larger ones looped up in the most natural manner possible. Cuttings can be taken of Hibiscus. I find they root readily, and if pinched and allowed to remain in comparatively small pots, they soon show flowers. These will be found to be extremely effective arranged among Ferns.

Bouvardias.—The young plants that were potted some weeks ago will now be ready for a further shift into a size larger pot. Now that the weather is getting warmer, they may be moved into a frame, and for a time they should be slightly shaded during the hottest part of the day. Give them a slight spraying with the syringe twice daily, and as they advance in growth they will be greatly benefited by occasional waterings with weak liquid manure. Any shoots getting away from the others should be pinched to promote a compact habit.

The Hardy Fruit Garden.

Apples and Pears.—Trees growing on walls should now be gone over and have the shoots stopped. This must be done carefully, as, if all the shoots were pinched indiscriminately, the result would be that the strongest would again break into growth and produce a lot of small, useless wood. These vigorous shoots should be left somewhat longer than the weak ones, and can be finally shortened back at the winter pruning. Remove all badly placed and ill-shaped fruits, and leave no more on the tree than it is capable of bearing. I see caterpillars are becoming very troublesome, possibly owing to the recent cold weather. Means should be taken to prevent them spreading by vigorously syringing with Quassia Extract or some other approved insecticide.

Fruits Under Glass.

Vines.—Young pot Vines for next year's fruiting will now be growing rapidly and may be assisted with liquid manure or a little of Thomson's Vine Manure. They must be kept free from spider, as any damage to the foliage from insects or otherwise will most certainly have an injurious effect on the proper ripening of the canes. The laterals should be closely pinched, and the leader stopped when the desired length has been attained.

Figs.—The second crop will now be showing nicely on the earliest trees, and the fruit should be thinned out judiciously. Pinch the young growths as they advance, say, at the fifth leaf, unless, of course, an extension is wanted. Those growing in pots will require to be carefully attended to, as, if allowed to become dry, they receive a serious check.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Iris Iota.—An interesting and beautiful hybrid, having for its parents the Californian *I. Purdyi* and *I. tenax* from North-Western America. The new-comer partakes more of the first-named species, the creamy or whitish ground being freely reticulated with lilac and rose. From Mr. Rickarton Dykes, Godalming.

Iris Chrysographes.—This beautiful and graceful kind was shown by Miss Willmott and Mr. Dykes. It is probably allied to the *I. sibirica* set, and has the same narrow grassy leafage. The dominating colour tone is intense violet and imperial purple, the long, ovate-acuminate blade of the falls exceedingly rich in colour.

Erigeron hybridus B. Ladhams. The pot-grown plants were 2½ feet high, the predominating colour tone of the flower-heads rosy pink, quite a new shade in this family. From Mr. Ladhams, Southampton.

Lupinus Primrose Dame.—A charming variety, having deep canary-coloured flowers in long spikes. In general appearance it is a glorified Tree Lupine, the greatly extended raceme of flowers suggesting the influence of *L. polyphyllus*. Really, the flower-spike is that of the latter, the habit that of the Tree Lupine. A valuable plant. From Messrs. Barr and Sons, Covent Garden.

Papaver Lady Frederick Moore. A very handsome Oriental Poppy. The pink colour is very charming. From Mr. Amos Perry, Enfield.

Clematis Sieboldii.—Of this very old and beautiful species a well-flowered example on balloon trellis was shown by Miss Willmott, Warley Place. The petals are rounded and white, which contrasts well with the spreading cluster of floral leaves at the centre of the flower.

Verbascum Warley Rose.—A 5-feet-high specimen of this was shown in a tub. It is invaluable by reason of its colour, which is of rose pink shade and quite new in this fine race of plants. The branching raceme is much more graceful than the close spikes of older varieties. Given freedom, this must become a great garden plant. At present it is unique. From Miss Willmott, Warley Place.

Deutzia discolor elegantissima.—A very beautiful shrubby kind with a profusion of pink-flowered trusses in axillary clusters on long, arching, graceful branches. The starry flowers add a charm to a delightful plant.

Ribes Brocklebankii.—Valuable for the uniform greenish golden colour of its leaves, and likely to be of service for grouping in conjunction with others of more sombre tone. These came from Elizabeth Lady Lawrence, Dorking (gardener, Mr. W. Bain).

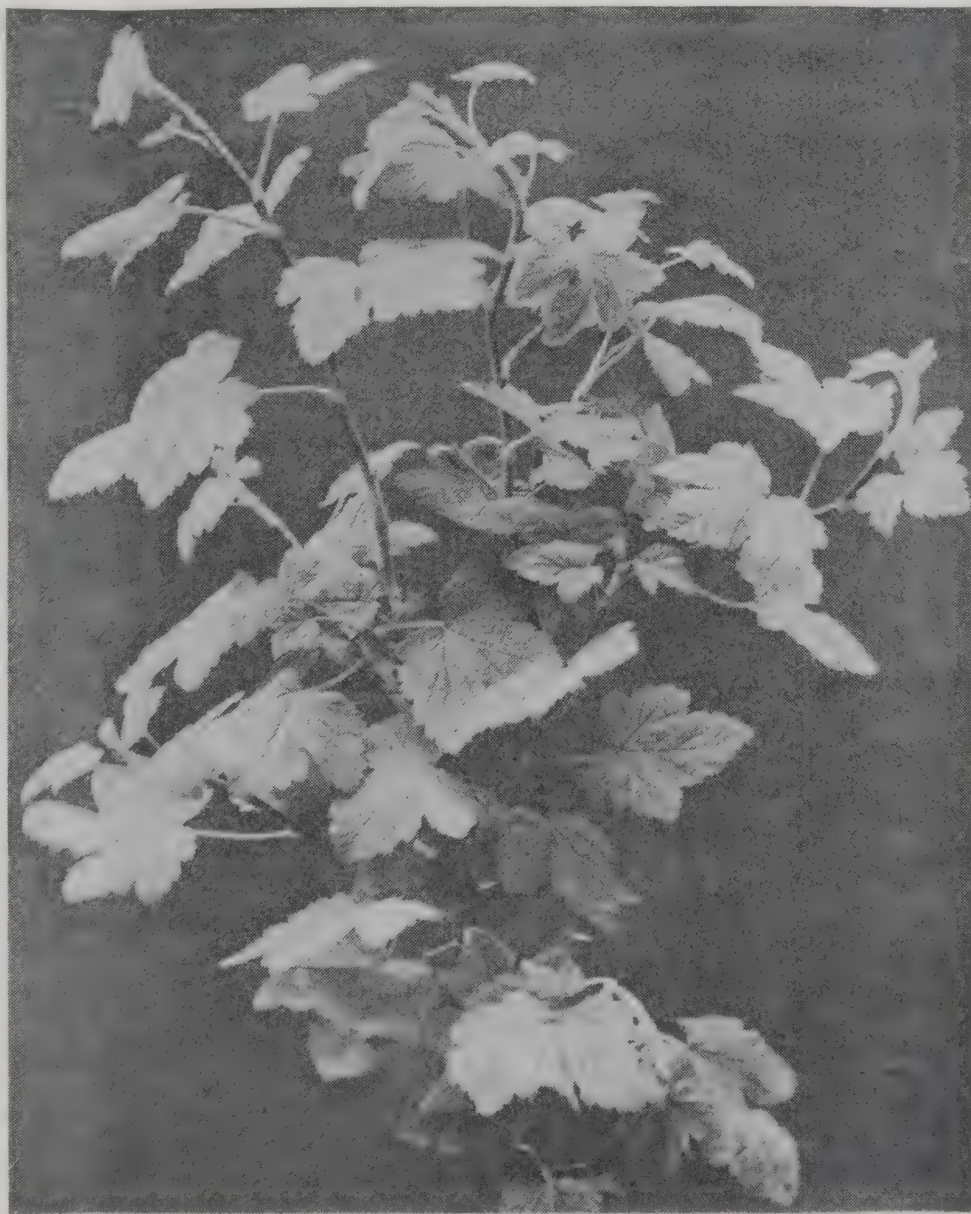
Mimulus Wargrave Fireflame.—A dwarf-growing kind with large flowers of brownish scarlet hue, very freely produced. The plant

is about eight inches high and very striking. Shown by Messrs. John Waterer, Sons and Crisp, Limited, Bagshot and Twyford.

Iris lævigata alba.—This is the white-flowered form of the typical species, and a beautiful and rare plant.

Iris sibirica Emperor.—As far removed by its superiority from *I. s. orientalis* as that fine variety is from the typical species, than which we do not think we can better describe it. In colour it is deeper and richer. A good plant in every way.

Iris Kashmir White.—Best described as a giant pallida form, with handsome white flowers on 4-feet-high stems. The lateral branches are unusually long, which gives the plant an import-



RIBES BROCKLEBANKII, A NEW HARDY SHRUB WITH BEAUTIFUL GOLDEN FOLIAGE.

ance of its own. These three widely distinct and good garden Irises came from Messrs. R. W. Wallace and Co., Colchester.

Carnation Mrs. Griffith Jones.—A superbly formed flower of soft apricot colouring. A very charming variety.

Carnation Mrs. Brotherstone.—A freckled or fancy sort, in which the predominating shades are purplish and crimson. The flower is very large, of superb form and strongly Clove scented.

Carnation Robert Bruce.—Deep apricot, with almost orange shading, which adds intensity to an exceptionally rich bit of colour. A very fine self. These three fine novelties were shown [by Mr. James Douglas, Great Bookham, Surrey.

AWARDS TO STRAIN.

Lupines.—Hybrids of arboreus and polyphyllus, embracing yellows, rose and yellow, violet, blue and white, lavender and dark blue. From Messrs. Barr and Sons.

Aquilegias.—A particularly high-class lot in which scarlet and yellow, cream, white, pink and other shades combined. From Mrs. Scott-Elliott, Teviot Lodge, Hawick, N.B.

Antirrhinums.—A remarkable range of colours in the three degrees of heights, viz., Tom Thumb, Medium and Tall, was displayed, the flowers and spikes being of exceptional size. For fuller details see report of the show. From Messrs. Dobbie and Co., Edinburgh.

All the foregoing were shown before the floral committee of the Royal Horticultural Society on the 3rd inst., when the awards were made.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

ANTIRRHINUMS DISEASED (E. K. P.).—The Antirrhinums are attacked by the fungus *Septoria Antirrhini*. This fungus is apparently spreading over the country, and we have had several complaints lately of the damage it has caused. Remove the diseased portions as completely as possible, and spray the remainder with potassium sulphide at the rate of 1oz. to three gallons of water.

"FIRE" IN TULIPS (W. W.).—The Tulips are suffering from "fire," due to the attack of the fungus *Sclerotinia parasitica*. You will see that we have given an account of the method of dealing with this to several of our correspondents lately in our columns, and think it would be as well to destroy the bulbs of Golden Crown and remove the soil as completely as possible, so as to avoid harbouring the resting bodies of the fungus for another year, replacing it with fresh soil.

TREATING A SLOPE (The Birches).—The terraced arrangement would, we think, prove rather formal, and two other ways remain if not incongruous with the surroundings. These are leveling up the bank and constructing a retaining wall at the front, specially arranged to receive a fine vegetation, which would also permit of bedding plants on the flat area above, or it may be done down in grass. The other way would be to construct a small rockery on the slope. Either of these would add permanent interest to the surroundings and do away with your present difficulty. The better time for the above work would be early autumn. If you think we can further assist you, please write us again.

TULIPS DISEASED (J. F. B.).—The Tulips are affected by the fungus *Sclerotinia parasitica*, to which we have frequently referred of late. The fungus is apt to form resting bodies in the soil and to attack Tulips planted therein in succeeding years. It also forms resting bodies just in the necks of the Tulip bulbs, and so may be carried over from year to year. The disease is always most prevalent when the foliage is exposed during its growing period either to cold winds or frosts, and it repays the attention for shields of Broom or other shrubs to be put among the growing plants.

TREES AND SHRUBS.

ABOUT LONICERAS (Mrs. R.).—Of the *Lonicera* concerning which you enquire, *Lonicera nitida*, of comparatively recent introduction from China, is a neat, twiggly evergreen shrub, clothed with small, ovate, glossy leaves of a leathery character. The flowers are creamy white and fragrant, but not large enough to be very conspicuous. *Lonicera xylosteum* reaches a height of 5 feet to 6 feet and more. The flowers are small and cream coloured, and altogether it is not of high ornamental value. The third, *L. tartarica splendens*, will at times considerably exceed the height of 6 feet, but may be kept down to

that if required. The flowers, which are borne in April and May, are reddish in colour. *Lonicera nitida* may be associated with choice shrubs, but the other two are only fit for the wilder shrubbery. They are of a very accommodating nature, perfectly hardy, and will grow in any ordinary soil.

MISCELLANEOUS.

CRAB APPLE LEAVES (*Mrs. M.*).—The leaves of the Apple sent are apparently suffering from cold draughts, and the brown spots may prove a centre from which fungus attacks may spread. It would be well to spray the trees with half-strength Bordeaux mixture in order to check the trouble.

NAMES OF PLANTS.—*W. J. S.*—We believe the Rose to be *Mme. Jules Siegfried*, if it is a climber; if a dwarf grower, it may be *Zephyr*.—*E. M. Whittlesey*.—Rose Captain Caristy; if a strong grower it would be the climbing form of this old Rose.—*Ignoramus*.—Rose General Schablikine.—*Subscriber*.—Sedum roseum, Rose-root or Cudde-me-tight.—*E. B. Astrop*.—1, *Achillea Huteri*; 2, *Achillea rupestris*; 3, *Sedum aizoon* variety.—*M. E. R.*—*Syringa persica*.—*A. W. F.*—*Geranium sylvaticum*.—*W. D.*—1, *Cotoneaster horizontalis*; 2, *Olearia Haasti*; 3, *Arbutus Unedo* (Strawberry Tree); 4, *Buxus sempervirens* (common Box); 5, *Spiraea van Houttei*; 6, *Crataegus Pyracantha*.—*C. P. Kinson*.—The Lilac sent was one of the many unnamed forms of *Syringa vulgaris*. It was apparently a semi-double variety, but too far faded or withered to tell.—*W. J. H.*—1, Rose Homère; 2, Marie d'Orleans; 3, *Salvia pratensis*; 4, *Rubus nutkanus* (Salmon-berry); 5, *Rubus laciniatus*; 6, *Rubus phoenicolasius* (Wineberry). Treat the *Rubus* species like Raspberry for fruiting.—*W. E. P.*—*Scilla peruviana*.—*S. G. H.*—*Raphiolepis ovata*.—*Minoriid*.—1, *Anthurium scherzerianum*; 2, *Begonia Rex* var.; 3, *Ornithogalum lacteum*; 4, specimen too scrappy to identify; 5, *Zebrina pendula*; 6, *Tradescantia crassifolia*; 7, *Plumbago rosea*; 8, cannot name without flowers; 9, cannot name without flowers; 10, *Chlorophytum elatum*; 11, *Sparmannia africana*; 12, *Cyperus alternifolius*; 13, cannot name without flowers; 14, *Begonia weltonensis*; 15, *Begonia* sp., cannot name without flowers; 16, *Crassula coccinea*; 17, *Cotyledon* sp.; 18, cannot name without flowers; 19, *Campanula isophylla*; 20, cannot name without flowers. There is nothing wrong with the Vine leaf; it is apparently quite healthy.—*J. J.*—1, *Ocotelea officinalis*; 2, *Saxifraga cuneifolia*; 3, *Saxifraga granulata* flore pleno; 4, *Saxifraga aizoon*.—*M. I., Bucks.*—1, *Spiraea japonica*; 2, *Neillia opulifolia*; 3, *Prunus Padus* (Bird Cherry); 4, *Spiraea Thunbergii*.

SOCIETIES.

NATIONAL HARDY PLANT SOCIETY.

THERE was a very poor attendance at the above society's show, held in the Royal Horticultural Society's Hall, Vincent Square, Westminster, on June 4. The competitive classes were feebly contested, except perhaps the class for a decorated table, in which competition was very keen. The trade exhibits were very good, and it seems a great pity that the show was not better patronised. The following is a list of medals awarded:

LARGE GOLD MEDALS.

Messrs. Dobbie and Co., Edinburgh, for a magnificent collection of Antirrhinums and Aquilegias.

Messrs. Kelway and Son, Langport, for a choice assortment of Delphiniums, Paeonies and Pyrethrums, for which this firm has a world-wide reputation.

Mr. James Box, Hayward's Heath, for a most interesting group of hardy flowers, including *Paeonia alba grandiflora* and *P. lobata*. An award of merit was granted to the latter.

Messrs. Piper for a vast collection of hardy flowers, including Saxifrages and Campanulas.

SMALL GOLD MEDALS.

Messrs. H. B. May and Sons for Ferns.

Messrs. G. and A. Clark, Limited, and Messrs. W. and J. Brown, Peterborough, for extensive groups of hardy flowers, in which *Eremurus robusta* was conspicuous.

Messrs. Barr and Sons for an intensely interesting collection of Irises, Lupines and Lilies.

Mr. Amos Perry for Oriental Poppies.

SILVER-GILT MEDALS.

Messrs. Phillips and Taylor, Messrs. T. S. Ware, Limited, and Messrs. Cutbush and Sons, all for groups of hardy flowers.

Messrs. Waterer, Sons and Crisp for a miscellaneous group of hardy flowers, in which we noted *Dianthus inodorus* and *D. dependens*.

Messrs. Sutton and Sons for Aquilegias, a remarkably fine long-spurred strain.

Messrs. Harkness and Sons for an extensive collection of Oriental Poppies and Lupines.

Messrs. James Veitch and Sons for Irises, *Eremuri*, *Anchusa* and other choice hardy flowers.

Mr. Frank Bouskell and Messrs. W. Artindale and Sons for hardy flowers.

SILVER MEDALS.

Messrs. R. H. Bath, Limited, Wisbech, for Tulips, also Paeonies and Lupines.

The Misses Hopkins for rock plants.

Mr. G. W. Miller for herbaceous flowers.

Messrs. Reamsbottom and Co. for St. Brigid Anemones and Lupines.

Mr. Reuthe for beautiful and little-known alpine and shrubs.

Mr. Clarence Elliott for a well-planted garden of alpine. Messrs. Ladhams, Limited, for hardy flowers.

AWARDS OF MERIT.

Campanula Hohinackeri.—Shown by Messrs. Piper. A graceful species, growing about eighteen inches in height. The slender stems are heavily laden with pale mauve blue flowers. It is a biennial, and seeds very freely.

Erigeron Asa Gray.—Shown by Messrs. Artindale and Son. The flowers are uncommon—being light biscuit-coloured—and freely produced about eighteen inches from the ground.

Erigeron hybridus B. Ladhams.—A rosy pink variety with a pleasing bronze tint in the bud. Height 2 feet, very free. From Messrs. B. Ladhams, Limited, Shirley Nurseries, Southampton.

Erysimum linifolium.—A free-flowering alpine with mauve-tinted flowers borne over a long season. Shown by Mr. Clarence Elliott.

Paeonia lobata.—A beautiful species with pink, Tulip-shaped flowers, shown by Mr. James Box.

BATH AND WEST AND SOUTHERN COUNTIES AGRICULTURAL SOCIETY.

THE annual exhibition of this society opened in glorious weather at Swansea on May 28, and for the number of exhibits and general interest it well maintained its reputation of former years. The horticultural section was again a distinct success, and was, in fact, more extensive than usual. Many of the trade firms of the immediate neighbourhood were represented, also others from further afield.

Sweet Peas were a prominent feature, exceptionally noticeable being groups from Messrs. Dobbie and Co., Edinburgh; Mr. W. Treseder, nurseryman, Cardiff; and Miss Hemus, Upton-on-Severn. In the first-named group conspicuous varieties were Dobbie's Orange, Melba, Lavender, King Manoel, Royal Purple and Norma. In the next group Phyllis Bide, Prince George, Scarlet Emperor, Edith Taylor and Maud Holmes attracted attention; while Miss Hemus staged numerous varieties of the Paradise strain, Crimson, Scarlet, White, Amazon and Mrs. Harriet Hemus being all very fine.

Messrs. John Waterer of Bagshot sent a very nice group of Rhododendrons, as also did Mr. James Harris, nurseryman, Blackpill. The latter's group occupied the end of the large tent and also a considerable outdoor space. In addition, he exhibited a large and interesting group of mixed Primulas and St. Brigid Anemones.

Roses were well shown by Mr. Roland Adams, White Wells Nurseries, Bath; Messrs. Walters and Son, Bath; Messrs. George Cooling and Sons, Bath; and Messrs. Paul and Sons, Cheshunt.

For general interest the exhibit of Messrs. R. Veitch and Sons, Exeter, was perhaps the best in the show. In a large and prettily arranged group were found *Sarracenia*, Ferns, Japanese Maples, various stove foliage plants, alpine, and trees and shrubs. Among the latter were finely flowered branches or plants of *Sophora tetralix*, *Buddleia Colvillei*, *Fendlera rupicola*, *Solanum crispum*, *S. jasminoides*, *Tricuspidaria lanceolata*, *Robinia Kelseyi*, *Olearia insignis*, &c. The following plants were also very striking: *Leucopogon Richei*, *Nertera depressa*, *Gerbera* and *Streptocarpus* in variety, *Lathyrus splendens*, *Calceolaria Forgetti*, *C. Golden Glory*, *C. Veitchii* and *Celmisia spectabilis*.

Messrs. Godfrey and Sons, Exmouth, exhibited a large group of Pelargoniums, showing several sections of the genus, while their Oriental Poppies were also very fine.

In a large group of miscellaneous plants, the president of the show, Sir J. T. D. Llewellyn, included Palms, *Schizanthus*, *Azaleas*, *Rhododendrons*, *Primula sikkimensis*, &c.

Begonias were well shown by Messrs. Blackmore and Langdon, Twerton Hill Nursery, the basket varieties *Eunice*, *Golden Shower* and *Gladys* being much admired. The same firm exhibited a fine group of Delphiniums, Carnations and other plants. *Delphinium Lord Curzon* and *D. Statuairi Rude* were specially fine.

Messrs. William Cutbush and Son, Highgate, in a tastefully arranged mixed group included Roses, Carnations, Lilies, Japanese Maples, Palms, *Rhododendrons*, yellow *Richardias* and other plants.

Herbaceous plants, including Pyrethrums, Gaillardias, *Heucheras*, *Incarvillea Delavayi* and others, were shown by Messrs. Rich and Co. of Bath; while Mr. W. Treseder of Cardiff, Messrs. Bakers of Wolverhampton, and Messrs. H. and W. Evans, Cardiff, sent very good groups of similar kinds of plants.

The feature of Messrs. Reamsbottom's exhibit from Geashill, King's County, Ireland, was St. Brigid Anemones, the flowers being shapely and richly coloured. *Centaureas* from Messrs. Jarman and Co., Chard; Pyrethrums from Messrs. Tuplin and Son, Newton Abbot; and Sweet Peas from Messrs. Bide of Farnham were much admired.

Lilies and herbaceous plants were well shown by Messrs. Wallace of Colchester, *Habranthus pratensis*, *Eremuri*, *Allium rosenbachianum*, *Primula bulleyana* and Oriental Poppies being very conspicuous in a large and decorative group. In the same tent Mr. Maurice Prichard exhibited an interesting set of rock plants, while a large and varied collection of rare shrubs was shown by the Donard Nursery Company, Newcastle, County Down.

Ferns and Cacti from Mr. H. N. Ellison of West Bromwich came in for great admiration, the Ferns especially being wonderfully well grown. Carnations from the Countess Cawdor were also much admired.

Messrs. Young and Co., Hatherley, Cheltenham, provided an extensive group of Carnations, in which Scarlet Glow, Mrs. C. W. Ward, Carola, Duchess of Devonshire and the Hon. Lady Neeld were conspicuous.

ROYAL HORTICULTURAL SOCIETY.

THE last meeting was held on Wednesday, June 3, at Vincent Square, Westminster. The show was of a high standard, particularly in respect of hardy flowers; but the attendance was not great, owing, no doubt, to the show being held in holiday week.

FRUIT AND VEGETABLE COMMITTEE.

Present: A. H. Pearson, Esq. (chairman), and Messrs. J. Cheal, W. Bates, J. Willard, E. Beckett, H. J. Wright, A. Bullock, Owen Thomas and W. Poupert.

A silver Banksian medal was awarded to C. Eric Hambro, Esq., The Gardens, Pickhurst Mead, Kent, for a group of Melons.

ORCHID COMMITTEE.

For the first time for a very long while no awards were made to new Orchids. There was, however, an unusually long list of novelties to gain awards from the floral committee, which more than compensated for the lack of novelty among the Orchids shown on this occasion.

The following awards were made to groups of Orchids:

Silver Flora Medals.—H. T. Pitt, Esq., Stamford Hill; Messrs. Sander and Sons, Messrs. Charlesworth and Co., Messrs. Stuart Low and Co. and Messrs. Armstrong and Brown.

Silver Banksian Medals.—Messrs. Hassall and Co. and Messrs. J. and A. McBean.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. W. A. Bilney, E. A. Bowles, W. J. Bean, J. W. Barr, G. Reuthe, J. W. Moorman, C. E. Fielder, C. Blick, W. Howe, J. Jennings, W. Bain, R. W. Wallace, C. E. Shea, G. Paul, W. Cuthbertson, W. P. Thomson, J. T. Bennett-Poß, E. H. Jenkins, J. F. McLeod, W. H. Page, F. W. Harvey and A. Turner.

Messrs. R. H. Bath, Limited, Wisbech, staged a nice lot of Sweet Peas and Tulips. Of the former, Scarlet Emperor, Orange Perfection, Walter P. Wright (lavender), Lady Miller (pink and cream), Glow (a nice shade of orange scarlet) and Lillian (pink) were some of the more distinct. Of the Tulips, *gesneriana lutea*, Orange Globe, Parisian Yellow, Flambeau, Baronne de la Tonnaye (fine rose) and *Moralis* (rich purple) were among the best.

Messrs. Dobbie and Co., Edinburgh, arranged a glorious bank of Antirrhinums and Sweet Peas, the former in the three sets of Tom Thumb, medium and major varieties, and perhaps nothing in the show attracted a greater share of attention. Snapdragons are everybody's flowers, and may be grown by all. Of the more important we noted Maize Queen, Amber Queen, Rose Queen, Yellow Queen, Sunset (red and yellow) and nobile (which embraces the shades of colour seen in the *Dendrobium* of that name). These all belong to the medium set. Cottage Maid (crimson), Queen of the North (fine white), Delicata (pink and white) and Tom Thumb (white) were all good. The Sweet Peas were an equal success and finely grown. Lavender G. Herbert, Melba, Dobbie's Orange, Dobbie's Cream, Frilled Pink, Alfred Watkins (a fine lavender) and Thomas Stevenson (orange scarlet) were among the best vases of these flowers.

Messrs. John Waterer, Sons and Crisp, Limited, Bagshot and Twyford, set up a bank of Irises, Lupines, Pyrethrums and Poppies. All were in very charming array, and quite representative of their class. The Irises of the pallida set were very beautiful and in fine array. Gaillardias, too, were well shown. At one end of the group choice alpine were staged, *Lewisia rediviva* and *Dianthus alpinus albus* being among the more important.

Mr. George Prince, Oxford, displayed an interesting lot of Rose species and varieties. The rarer kinds included *Rosa hemisphaerica*, golden yellow, flowers very double; *R. watsoniana*, with very fine foliage; *R. ochroleuca*, yellow flowers, small foliage; *R. nitida*, virtually a pygmy *R. rugosa*; and *R. spinosissima*, pale yellow. *Comtesse de Nadaillac* among Hybrid Teas was very charming.

Messrs. R. W. Wallace and Co., Colchester, had a delightful lot of Irises, both species and varieties. In the Flag section we noted such as Miss Wells, *Isolene*, Kashmir White, *flavescens*, Lady Foster (a lovely blue pallida form of great stature), Kashmir (fine blue) and Caterina (a grand pallida form nearly four feet high). Hybrid forms of Cushion and other Irises were also on view; also the white-flowered form of *I. laevigata*, a most graceful plant.

Messrs. H. B. May and Sons, Edmonton, had a nice display of *Heliotrope*, *Hydrangea* *Mme. Moulière*, *Fuchsias*, *Verbena* Miss Willmott and V. King of *Scarlets*. The pink-flowered *Verbena* Miss Willmott was particularly good, well-flowered examples being shown in 5-inch pots.

Mr. H. Burnett, Guernsey, had a very fine assortment of Carnations, the handsome flowers well disposed in large vases. Carola (crimson), Salmon Enchantress, Marmion, Monarch, Snowstorm, Pluto (crimson), Mandarin (fancy), Mary Allwood, Enchantress Supreme, Mrs. Clode, Geisha and Scarlet Glow were the more prominent.

Messrs. Kelway and Son, Langport, Somerset, had a capital table of Paeonies and Delphiniums, Wilbur Wright (crimson), Balliol (pink), Purity (white) and Homer (double pink) being among the best.

Messrs. Stuart Low and Co., Enfield, had a fine show of Carnations Princess of Wales, Baroness de Brien, Gorgeous, Carola, Princess Juliana and Venus, the last, a pure white Perpetual Malmaison, being very fine.

Messrs. H. Cannell and Sons, Eynsford, Kent, had a full table of rambler and pillar Roses, of which Lady Gay, American Pillar, White Dorothy, Blush Rambler, Dorothy Perkins, Excelsior (very rich and beautiful in colour) and Dorothy Dennison were all very fine. The whole of the plants were pot-grown examples about six feet high and flowering most profusely. The plants made a great show.



A view in the Rose Garden at Hallingbury Place, Bishop's Stortford.

THE GARDEN.

No. 2222.—Vol. LXXVIII.

JUNE 20, 1914.

NOTES OF THE WEEK.

To Our Readers.—To meet the wishes of many of our readers, we have decided to publish *THE GARDEN* a day earlier than usual. Copies should now be on sale at all London book-stalls and newsagents on Wednesday morning instead of Thursday as hitherto, and in the provinces on Thursday morning instead of Friday. We shall be glad if any reader who experiences difficulty in obtaining *THE GARDEN* regularly will communicate with us.

Eremurus robustus.—The tall, stately spikes of *Eremurus robustus* make a striking appearance in many gardens in June. It is a native of Turkestan, and difficulty is sometimes experienced in its cultivation. It does best when given deep, rich, well-drained soil on a south border. The illustration depicts a group of this noble plant flowering on a sunny slope in Sir Frank Crisp's gardens at Friar Park, Henley-on-Thames.

A Pleasing Combination.—*Eucalyptus globulus* makes a very pretty decorative plant, particularly when used in combination with *Delphiniums* of various shades of blue, the glaucous hue of the foliage of the one forming a harmony of colour with that of the flowers of the *Delphiniums*. If such beds are edged with one of the red *Lobelias*, *cardinalis* or *fulgens* or their varieties, they will give a pleasing effect.

Useful Plants for the Greenhouse.—We were very much pleased the other day by a fine group of *Calceolaria Clibranii* intermixed with *Nicotiana Sanderæ*. All the plants were well grown, and made a very attractive display. Both are easily raised from seed, and require little attention. *Begonia Lloydii* mixed with well-grown plants of *Lobelia tenuior* also formed a very pleasing combination.

Tomato Disease in Seed.—The current issue of the *Kew Bulletin* contains an interesting article on the hibernating of the mycelium of the black spot Tomato disease, *Macrosporium Solani*, in the seeds of infested fruits. It has been proved conclusively that the mycelium can, and does, actually exist in the tissue of the seeds, as well as in the form of a web on the outside of the integument. It is pointed out that seed should on no account be saved from diseased fruit, even if the black spots are not present.

Pink Roses and Blue Alkanet.—A very charming floral combination that we have in our garden just now is provided by the beautiful

glowing pink Rambler Rose *Tausendschön* and the Dropmore variety of *Anchusa italica*. The Rose is scrambling over a trellis fence, whence its festoons of flowers are flung in many directions, and the *Anchusa* is growing in the border immediately in front. Between the tall masses of blue one gets glimpses of the Rose, and the effect is very telling. It loses none of its charm by the fact that the grouping was quite accidental.

which it blooms no more until the following June; while the Rose from the cutting continues to flower all through the summer and early autumn. This difference has been observed for a number of years. That the two trees are from the same variety there can be no doubt, for the Rose on its own roots was raised from a cutting of the tree on the wild Briar stock.

An Attractive Plant for the Rockery.—

In *Eriogonum umbellatum* we have an alpine of a distinct type, with pleasing and massive umbels of yellow flowers on a thick scape. The base of the plant also presents another pleasing feature; there we see a circular arrangement of its spoon-shaped leaves, whose stalks are beautifully tinted with red on the upper side. The effect is that of a bright red rosette, and the contrast is very beautiful with the yellow blooms and grey foliage. The bright colouring is only developed when the plants enjoy sunny weather.

Viola cornuta purpurea.—This perfectly hardy floriferous little plant deserves to be more widely grown than would appear to be the case. Somewhat resembling single blue Violets, the freely produced flowers possess an advantage over many of the dwarf growers by reason of their long, slender stems, making them suitable decorative subjects when cut. They are useful as borderings for Rose or other beds, looking well in our own garden associated with bushes of *Frau Karl Druschki*. *Viola cornuta purpurea* thrives quite happily in practically any soil, and flowers continuously throughout the summer and autumn without special attention beyond the usual occasional removal of spent blooms. Cuttings root freely in frames in the autumn.

Variation in the Lyon Rose.—It is well known that the blooms of this exquisite Rose show a great tendency to vary. Even Roses on the same bush are sometimes remarkable for their dis-

similarity. At the same time there are unquestionably inferior stocks of this variety in commerce. This was recently brought very forcibly to our notice in a garden where stocks of this variety, obtained from English and French growers, were seen flowering under similar circumstances. In each case the English-grown Roses showed a far greater depth of colour, while there was also a decided difference in the foliage of the plant.



A NOBLE BORDER PLANT, EREMURUS ROBUSTUS, IN THE GARDENS AT FRIAR PARK.

Roses on Their Own Roots.—It is a very debatable point as to whether Roses are better on their own roots or when budded on a wild stock. The differences are sometimes interesting. At the present time we have under notice two fine plants of *Alister Stella Gray*. The plant worked on to the wild Briar flowers a clear fortnight before the other, which was raised from a cutting. But the first Rose to flower is soon over, after

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Early Loganberries.—On June 7 I picked off a Loganberry bush on a wall in my garden with a west aspect half-a-dozen fruits, quite ripe. This is abnormally early for me, and I would be interested to know if it is unusually early in other gardens.—S. A. W. WATERS, *County Dublin*.

A Scottish Lady Gardener.—The Rev. David R. Williamson desires us to say, with reference to his article on "A Scottish Lady Gardener," in our issue for the 6th inst., that the rock gardens and Water Lily pond at Logan were both designed and laid out by Mr. McDouall, who, as indicated in the article in question, is an earnest horticulturist, and takes the deepest interest in his gardens and grounds.

Three Good Climbers for May and June.—I am enclosing a small photograph of a temple

the photograph demonstrates, moraine treatment suits it admirably. I am happy to say that, though usually I have to depend upon division for its propagation, the present *annus mirabilis* has caused it to set a plentiful crop of seeds. This *Primula* must not be confounded with the totally distinct true *P. nivalis*.—RAYMOND E. NEGUS, *Walton-on-Thames*.

Narcissus triandrus calathinus.—Of all the *Narcissus* species, this is perhaps the most beautiful. Originally found by the late Mr. Peter Barr in the Isle of Glénan, off Brittany, it is now reported to be almost extinct there. It is, however, remarkably free-seeding under cultivation, and considerable stocks of it have now been worked up by careful cultivators, so much so that the price, which a few years back was as much as 3s. 6d. a bulb, has now come down to 1s. It has been much employed by hybridists as a pollen parent, and such lovely flowers as Alabaster, Madonna and Alys have resulted from its use. As a plant it is quite on the small side, and gives

decrepit, having been allowed to grow without pruning or attention in the way of feeding. When Mr. P. Smith, the present gardener, took charge, he suggested cutting it well back, and also lifting the pavement of the conservatory to allow the plant to be supplied with water and other nourishment. This has been done, and the Myrtle is again showing renewed vigour and looks as if it would be in capital condition shortly.—S. A.

Roses and Clematises.—In the issue for June 13, page 301, is a note upon the beauties of these flowers when suitably used in combination. I have had some remarkably pleasing results from these, and give a few short notes upon a good method of cultivation. The Roses most suited, or at any rate those not harmed by the Clematis, are found chiefly among the strong growers that only produce one good show of bloom early in each summer. Quite a number of our beautiful and earliest flowering pillar and wall Roses are found among these. Carmine Pillar, with the Crimson and Blush Ramblers, *Hélène*, Goldfinch, Psyche, Tausendschön and some of the Ayrshires may be mentioned as good examples. The selection of Clematises seems best if confined to those known as the Jackmannii section, which carry their main crop of flowers upon the long growths of the same season. They also flower from the end of these growths first, and then bloom backwards along the strands of wood. Being thus late in flowering, they follow with a beautiful display after the Roses, and so fill in what would otherwise have been a rather serious gap. There is a second decided advantage in the Jackmannii section, for we can cut away all dead growth when pruning the Roses early in the spring. These Clematises can be cut down to their base, and so allow of a clear start each season.—A. P.

The Vitality of Seeds.—In your issue of May 2 Mr. Charles Comfort gives some interesting cases of the vitality of seeds. The following is within my own experience. Some years ago I prepared a piece of pasture land for planting trees. This land had been under grass for at least thirty-five years. Now it is well known that Charlock, or Ketlock as it is called in Lancashire, is never found growing in pasture land, yet the season after this land had been turned over it was quite yellow with Charlock, the seeds of which must have been lying dormant for over a third of a century. I remember, many years ago, an arable field on the Wiltshire Downs which was (*mirabile dictu*) practically free from Charlock, and was in consequence a source of some pride to its owner. The custom there was to plough only 2½ inches deep, owing to the close proximity of the underlying chalk. A new ploughman set his plough 3 inches deep, and the next summer that field was a glorious sight to anyone except a farmer, being a mass of yellow from end to end. From this it would appear that Charlock will not germinate at a depth of 3 inches. Stranger still, when buildings are cleared away in a town, the site often becomes clothed with wild plants. This is said to have been the case on the Aldwych site in the Strand. Perhaps some reader can confirm this.—WALTER DE H. BIRCH, *Walton-le-dale, Lancashire*. [Our correspondent is quite correct about the Aldwych site, but we think that the seeds of most of the vegetation there came from manure or from the feed-bags of horses.—Ed.]



PRIMULA HIRSUTA NIVEA ON THE COOL SIDE OF A MORaine.

in these gardens, showing the Yellow Banksian Rose, Clematis montana and Polygonum baldschuanicum. The Rose and Clematis have been a picture since early in May, and even at this date (June 10) are still smothered with flowers. I find the best time to prune them is immediately after they have flowered.—G. BURROWS, *Shendish Gardens, King's Langley, Herts*. [We regret that the photograph was not sharp enough for reproduction.—Ed.]

A Beautiful Hardy Primula.—I enclose a photograph of *Primula nivalis* of gardens, which we are told is really *P. hirsuta nivea*. I trust that you will find space for its reproduction, since I think that this beautiful *Primula* scarcely receives the attention it deserves. In my opinion it is head and shoulders above any other rock garden *Primula*, and I enjoy its annual display of snowy blossoms upon the cool side of my moraine as much as any other floral spectacle of the year. It is not fastidious in its wants, provided it is not allowed to suffer from drought. But, as

most pleasure when grown in pots and pans in a frame or cold house; but its extreme value for breeding purposes will always make it indispensable to anyone interested in hybridising, even in a small way. The pollen of its hybrid offspring, by the way, is not nearly so effective. It is the true species itself that should always be used.—ORNATUS.

An Interesting Old Myrtle.—There is an interesting plant of the Myrtle, *Myrtus communis*, in the garden of F. S. Hay, Esq., at Duns Castle, Duns, Berwickshire, where it has been since 1803. It originated from a sprig worn by the well-known beauty of the day, Miss Lucy Johnston of Hutton Hall, at a ball in 1777 or 1778. As there was no glass at Duns Castle at that time, the cutting was struck in another garden, and the plant came to Duns Castle in the year mentioned. It was planted out in a conservatory, and eventually assumed large dimensions, and was the cause of the house being named the Myrtle House. Within recent years it became somewhat

Primula Leddy Pilrig.—Though this is very like a derivative of *Primula pulverulenta*, there is no reason to doubt that its habit and general appearance are derived from *P. bulleyana*. Messrs. Stormonth of Carlisle possess a similar hybrid, but of a darker tint of salmon rose. The *Primula* family is full of surprises, so we need not wonder if the above is another. For the second time I secured a bit of *P. cockburniana* last year, an offset from an old plant, and it is flowering now and quite healthy, shaded by a large stone, where I am hopeful it will be perennial to a degree. Previously it proved an annual. The new *P. Juliae* exhibits a habit that renders its increase very easy. The young growths throw out roots as they push their way along the surface of the ground, and nothing could be easier than offsetting these and establishing them as single plants. It seems also to produce seed abundantly.—B.

Flowering Trees.—The wealth of blossom on trees, surpassing that which we usually see, has afforded a means of comparison of extreme importance. At the time of writing, Thorns are in the ascendant, and palpably the best decorative forms are pure white and crimson, represented by Paul's Double Crimson. Double Pink, which is rather rose than pink, is also good, but light pink or blush, of which we find several tints here, are largely ineffective. *Crataegus Aronia* is blossoming and is the best at present, but less effective than the common Thorn. A note may also be made of the quiet beauty of Rosemary, which is flowering more profusely than usual, and unpruned bushes of the commoner Roses are beginning to show what they will be very shortly. Colours seem to me to be much deepened; Fellenberg, for instance, approaches crimson, and *Rosa hemisphaerica* has the petals curiously edged with lightest green.—R. P. BROTHERSTON, *Prestonkirk, N.B.*

School Shows.—I was interested in the letter on school shows that appeared on page 235, issue May 9. I was attending a show at Wallingford recently, held under the auspices of the Oxfordshire Agricultural Association, and among the tents was one allotted to the children of schools in Oxfordshire. Prizes were given by private donors and the Oxfordshire Education Committee, and I should say that this proved to be one of the most interesting tents of the whole show. Not the least interesting of the exhibits were the pen drawings of bulbs and the various plants grown by the aid of different manures. These included Lettuce, Cabbage, Peas, and Potatoes, each lot bearing a label giving details as to the amount and kind of manure used. I think that we as parents have no need to wonder (when looking round such a tent) why our children are anxious to go to school, rain or snow, hail or blow. School must have an attraction for them such as it never had for us. Work of this kind must be of considerable educational value to the children and of real service to them in after years.—A. CRANSTONE, *The Gardens, Brightwell Park, Wallington, Oxon.*

FORTHCOMING EVENTS.

June 24.—Richmond (Surrey) Flower Show. Croydon Horticultural Society's Flower Show. Brighton Horticultural Society's Outing to Viscountess Wolseley's garden at Glynde.

June 25.—Isle of Wight Rose Society's Show at Ryde (provisional). Sherborne Floral Fête.

June 27.—Windsor, Eton and District Rose and Horticultural Society's Show.

COMPETITION FOR PLANNING AND PLANTING THE LITTLE GARDEN.

AS promised, we publish below replies to the queries which we have received in connection with our competition for planning and planting the little garden. We would remind readers that there is still plenty of time for entering this competition, in which we are offering cash prizes to the total value of £33 12s., as well as a number of book prizes, for the best designs. Competitors may send in designs for one, two, three or four sites, as there are separate prizes for each. Any competitor may send in more than one design for any of the plans. The coupon will be found on page iv.

Fences.—It is to be assumed that each plot is enclosed by a cleft oak fence 5 feet high. Competitors may mask this with plants in any way they think fit.

Locality.—Competitors should assume that all the designs could be carried out in gardens in the London district or the Midlands.

Tennis Courts in plans Nos. 3 and 4.—It is ideal that a lawn tennis court should be 120 feet by 60 feet, and should face north and south rather than east or west; but when a site is of limited size and the position cannot be altered, designers have to do the best they can in the existing conditions. The sites were purposely chosen to present difficulties which frequently occur. The competition is intended to be practical, not ideal. A court 40 feet by 140 feet is often as large as can be provided in a small garden.

Perspective Drawings.—It is not necessary to send a perspective drawing of each, or of any, plan; this is left to the competitor's discretion. Elevations of garden-houses, or of other architectural features, may be drawn on the third plain sheet if desired, instead of, or in addition to, a perspective view. A model may be sent in place of the perspective drawing if the competitor so desires.

Cost of Plants and Labour.—It is not practicable to fix a schedule of prices for different localities. In fixing the sums to be spent, the cost of labour is not taken into account; but elaborate schemes involving an amount of work which the owners of such gardens could not reasonably afford will be disqualified. A tool shed may or may not be included.

Prices for paving or for plants should not be mentioned. Details as to how the allowed sums are allocated need not be given.

Position of Sites.—No. 4 site can be assumed to be in the country or an outlying suburb.

Type of Houses.—It is assumed that the dwelling-houses are of the ordinary gable type. The walls of the house may be covered with climbers at the competitor's discretion.

Effects Desired.—The judges will base their awards on the effect which may be expected within a reasonable time of planting. Each garden should be planted so as to give a good effect for as long a period of the year as possible.

Planting Plans.—These must give the details of beds or borders shown in outline on the plans. If all four designs are attempted, four planting plans of beds and four of borders must be submitted.

Entrance Drive or Path.—This is not already designed, and should be shown on plan.

Garden Seats, Trellis, Pergolas, &c.—These may either be purchased or made at home, but cost must be considered.

Any competitor who has sent an enquiry not answered here in detail will please assume that the point raised is left to his or her discretion.

No further enquiries can be answered.

Competitors are at liberty to pin to their designs a descriptive memorandum not occupying more than one side of a foolscap sheet.

The last day for sending in designs is September 1, 1914. Any time up to August 20 the sheets of site plans on which the designs are to be drawn can be had on sending 4d. in stamps to the Editor.

SOLANUM CRISPUM.

THIS beautiful and free-growing Chilean plant, commonly known as the Potato Tree, is considered by many to be only half-hardy, and this wrong impression undoubtedly deters many persons from planting it outside. It is a robust and free-growing shrub from 12 feet to 16 feet high, with conspicuous bluish purple, fragrant flowers during May and June. It is not particular as to soil, and will be found an excellent subject for quickly covering a blank wall. After flowering is over, all weak wood should be removed to encourage new strong growths, which often attain a height of 8 feet to 10 feet in a summer, and it is upon these the flowers are borne the following year. In Cornwall it forms large bushes in the open, but in most parts of the country it needs the protection of a wall, where it will prove a very worthy subject. B.

NOTES ON CARNATIONS.

THE earlier border Carnations in pots, e.g., Lady Hermione and Leander, are at the time of writing producing flowers, and there will be an uninterrupted supply till those in borders and beds come in. Though there is plenty of bloom on Perpetuals, there is yet room for a selection of border varieties, and there are always the lovely bizarres, flakes and fancies in Carnations and the delicately refined Picotees of both sections, yellow grounds and white grounds, which I am hopeful will not always suffer the neglect they do at present. Whoever has given them the ordinary attention they ask for, which implies all along cool treatment, cleanliness and ventilation to the fullest extent, according to weather, agree that there is no difficulty in their cultivation.

The more recent varieties are, moreover, constitutionally very much more robust, and produce considerably more roots than the older ones they have superseded, and it is, consequently, easier to keep a healthy stock than at one time was possible for the ordinary cultivator. I strongly recommend gardeners to add a selection to their summer-flowering pot plants.

There is no reason to hurry the propagation of Malmaisons. One of the most successful growers I know—the most successful, indeed—does not begin to layer his plants till the end of July or the beginning of August. The layers root at that time very rapidly, and the cooler nights seem to affect the whole system of the young plants in a manner that induces a rapid growth, which ensures complete establishment

before winter sets in. It is usually desirable to select the healthiest plants for propagation, and if, as sometimes happens, disease has laid hold of all, then the layers should be made from the extreme tips, just long enough to secure a firm bit of shoot for rooting. These make far better growth than longer pieces with diseased leaves, and with careful treatment through the autumn and winter provide by no means unsatisfactory flowering plants.

Before these notes appear, the bulk of the Perpetuals will have been placed into their flowering receptacles and the important item of staking be engaging attention. Very strong, well-branched

THE NEWER CHINESE RHODODENDRONS.

(Continued from page 304.)

R. Fargesii, collected by Mr. E. H. Wilson during his first journey for Messrs. Veitch, has dainty rose pink, tubular flowers. As these open rather early in April, this is one of the species which Rhododendron enthusiasts in the South and West should cultivate, as it promises to be a good thing.

R. flavidum (primulinum).—Flowering when only a few inches high, this alpine species is valuable

half the length of the shoots, which reach 3 feet in height. This species seeds freely.

R. siderophyllum.—Flowering towards the end of April, this may be described as a "good-natured" plant, being free in growth and profuse in flowering. We have plants, 4 feet in height, a mass of pale blush-tinted blossoms with dark brown spots, individually half an inch across.

R. Souliei.—The glaucous green foliage and red-stalked leaves of this species give the plants a very distinct appearance. The rosy pink flowers are also markedly distinct, being 3 inches across and almost flat. A May-flowering Rhododendron.

R. sutchuenense.—This species forms a good-looking evergreen bush, with stout, leathery leaves up to 9 inches long. The rose-tinted flowers are bell-shaped and about three inches across. Our one regret in the London district is that the flowers open in March. It is worth trying in pots for greenhouse decoration.

R. yanthinum.—There are several purple-flowered species, and this at present is the most pleasing, being a rich glowing vinous purple. It flowers the second half of April, the individual blooms being $1\frac{1}{2}$ inches to 2 inches across. There seems to be no botanical difference between this species and *R. benthamianum*, though the flowers of the latter lack the rich colouring which is such a feature of *R. yanthinum*.

R. yunnanense.—Introduced to France by Abbé David in 1889, this must be accounted as one of the most useful garden plants. At their best about the middle of May, the plants blossom so freely as to almost hide the leaves. There is considerable variation in the white, blush-tinted flowers, which are spotted with reddish brown.

A. O.

SOME OF THE NEWER RAMBLER ROSES.

THESE are some delightful novelties among Rambler Roses that all who can find space for them should plant. One of the best is Marie Henriette Gräfin Chotek. This is how its raiser, Herr Lambert, styles it, so I suppose it is correct, although in some lists I find the word "Gräfin" placed first. This beautiful Rose is now (June 2) opening with me, and its flowers are like miniature Richmonds. It is a remarkable cross—The Farquhar x Richmond—for it possesses none of the Wichuraiana habit, but rather that of the Multifloras. This Rose blooms in clusters of three and singly, and although there is not the intense effect there would be from a pillar of Excelsa, yet the flowers are so useful for cutting that no one can afford to overlook it.

White Tausendschön will be wanted in every garden of fair size, for it is a most delightful kind and extremely showy. The colour is not exactly white, there being a faint suspicion of blush pink, while at times one can have two colours upon one plant. Both this and the ordinary Tausendschön would be more effective if the growths on each plant were reduced to two or three; then, by judicious feeding, we may have glorious big trusses and blooms. To plant at the base of White Tausendschön I can strongly recommend a lovely new dwarf kind named Echo. It is one of Lambert's, and is a great improvement on Louise Walter, the so-called Baby Tausendschön. I should like to see more of this effective planting of ramblers and the Dwarf Polyanthas,



RHODODENDRON SIDEROPHYLLUM. THIS IS A NEW CHINESE SPECIES WITH PALE BLUSH FLOWERS.

plants require more than one stick—some three, and very large ones with numerous shoots as many as five. By no means should the tying of the shoots at any time be neglected. Straight growths are an essential of success, and, apart from that, very vigorous shoots, if unsupported, are apt to snap off. The final stopping of the plants requires much consideration, and must be determined by local circumstances as well as by the habit of particular varieties. Seasons also have a very decided effect. The heat of last summer threw one considerably out in calculating just when to cease stopping. Some of the newer varieties may be stopped later than others. Triumph and Empire Day are examples of those that come on very rapidly, while Carola and Baroness de Brien are very slow, and cannot be stopped later than June. Lady Northcliffe has also been very slow in the autumn. Some are really late winter or spring flowerers, such as Alma Ward and R. F. Felton, which are really wonderfully beautiful then. The Hon. Gladys Fellowes, which Mary Allwood supersedes, is a very consistent producer. Continue limited applications of stimulating manures to all Carnations planted out, and keep aphids away by means of dustings of Tobacco powder.

Prestonkirk, N.B.

R. P. BROTHERSTON.

for sheltered nooks in the rock garden, apparently not exceeding $1\frac{1}{2}$ feet to 2 feet in height. The yellow flowers, about an inch in diameter, are terminal, three to five in a cluster, opening during April.

R. intricatum.—This pretty alpine species, which flowers early in April, was the subject of a coloured plate in THE GARDEN for June 6.

R. lutescens.—This is a rather tender April-flowering species with yellow flowers. It is readily separated from *R. ambiguum*, the flowers being terminal and axillary, towards the ends of the shoots singly or in pairs. This plant reached us first from France, and later Mr. Wilson sent home seeds.

R. polylepis (harrovianum).—Of this species a very considerable number of plants are already in commerce. It forms a nice bushy plant, but requires a sheltered spot, the leaves suffering from cold winds in exposed positions. The flowers are purple, $1\frac{1}{2}$ inches to 2 inches across, opening during April.

R. racemosum.—It will not be necessary to do much more here than mention this species, which is one of the most distinct and valuable Chinese Rhododendrons for the rockery, beds and borders. It was one of the first species introduced by the French in 1889. The white-tinted flowers are freely borne on the growths, often clothing

as one may now have almost any colour, either to harmonise or to contrast.

Christine Wright is a fine hybrid with very large blooms of a Dog Rose colour.

Kalmia is a grand new single. The foliage is a dark glossy green, and the flowers are white, with the upper half of the petals tinged with pink, producing a beautiful effect.

Braislwick Charm is the nearest approach to the Perpetual Wichuraiana. In some respects it resembles Alberic Barbier, but is quite distinct. The blooms are borne in light, artistic clusters, which renders it most valuable, and until we obtain a real golden Dorothy Perkins it will fill the gap, for the open flowers have quite a rich yellow colouring in the centre.

Lisbeth von Kameke is a seedling of the Blue Rambler, Veilchenblau, and is a very distinct shade of pale violet. This and Sweet Lavender, another of the bluish-tinted Roses, will lend a most beautiful effect among ramblers if tastefully grouped among the whites or creams.

Ethel is a lovely and most dainty rambler, producing graceful sprays of semi-double flesh pink flowers, and one specially useful for cutting purposes.

Mrs. M. H. Walsh and Lady Blanche are two fine new white ramblers, and will doubtless supersede White Dorothy, which is really not pure white. I also think the Rev. J. H. Pemberton's new white will be an acquisition to the Multifloras, for we have no good white in that section save Thalia, and this is much better. Dorothy Jeavons, a white sport of Blush Rambler, is rather a poor thing. Of course, we have Waltham Bride, a lovely early bloomer and deliciously fragrant; but this seems to me to be a different type to the Multifloras, more like a Hybrid Noisette, excepting that it blooms but once.

Sodenia will become a great favourite. It comes midway in colour between Minnehaha and Excelsa, and yields enormous trusses in great profusion.

Jean Guichard is fine, one of the type represented by Leontine Gerbaud and Desire Bergera. It is a fine addition, and is now some seven years old, but not much known.

Miss Helyett belongs to the large-flowered section of the Wichuraianas. The flowers are as large as an ordinary-sized Tea Rose, and as it is early flowering—opening now, in fact (June 2)—it will be a valuable addition. The foliage is delightfully glossy, and the flowers are rosy pink, with salmon pink centre.

Coronation is a lovely colour, bright scarlet, splashed with small white streaks. It is an effective rambler.

Source d'Or is golden yellow, passing to paler yellow. The trusses are not large, but it is a fine addition to the Wichuraiana group.

Perle von Wienerwald is a grand sort for its lasting qualities when cut. The huge trusses carry blooms fully 1½ inches across, and are of a lovely carmine pink inside and Carnation pink outside.

Sanders' White is one of the best additions to the double white Wichuraianas, and it has the

merit of being pure white. There are others under observation, and further notes on these will follow.

Other promising novelties are the Climbing Orleans Rose Donau, an improvement upon Veilchenblau; and Geisha Grüss an Freudendorf. Perhaps this will prove to be the best dark red Wichuraiana.

DANECROFT.

COLOURED PLATE.

PLATE 1496.

A BEAUTIFUL ROSE GARDEN.

It has become the custom in gardens of goodly dimensions to devote a portion entirely to Roses, or to Roses and plants that associate well with them. This plan is an ideal one, for the visitor is then able to compare the different varieties and to note the effect that each is capable of producing. Again, many—indeed, most—Roses give much better effects when grouped in good-sized

of Mrs. Lockett Agnew, who takes a very keen interest in practically all branches of horticulture. Although it has been impossible to reproduce the colours as true as we would wish, the plate serves to show what a charming effect can be obtained by grouping other plants of suitable character in the Rose garden. Here we find the Madonna Lily making a delightful foil to the more vivid Roses, while in the foreground sufficient of a bed of Nepeta Mussinii is shown to give an idea of what effect the association of red, white and lavender blue is capable of creating.

The pergola runs the whole length of the Rose garden, the brick pillars that support the Oak framework above being creased at about every fourth layer with old tiles. Near the pergola, but not shown in the coloured plate, is a paved pathway bordered with Lavender, out of which rise stout Fir poles at intervals of 8 feet or 10 feet, and each to a height of about five feet. These support a stout rope, along which climbing Roses, mostly of pink shades, are festooned. Clematises are largely used in this garden in association with Rambler Roses, pale lavender



A FINE BUSH OF THE NEW CHINESE RHODODENDRON YUNNANENSE.

masses of one sort than when grown as isolated varieties. Added to this we are able, with the aid of the simple Larch pole, or more pretentious pillar or pergola, to grow the many beautiful rambler varieties in association with those of dwarf form, and so realise the wonderful diversion, not only of colour, but of habit and time of flowering, that exists among members of the Rose family.

The coloured plate presented with this issue depicts a scene in the Rose garden at Hallingbury Place, Bishop's Stortford, the charming residence

of Mrs. Lockett Agnew, who takes a very keen interest in practically all branches of horticulture. Although it has been impossible to reproduce the colours as true as we would wish, the plate serves to show what a charming effect can be obtained by grouping other plants of suitable character in the Rose garden.

A CHARMING YELLOW ROSE.

WHAT a beautiful Rose Marquise de Sinety is! This year it has commenced to flower very early with us, earlier, indeed, than most of the other Hybrid Teas, and owing to the cool weather the blooms have come a really wonderful colour, best described, perhaps, as burnished orange yellow. Its dark maroon red foliage is so leathery as to successfully withstand mildew when many others fall a prey.

WORK AMONG THE OUT-DOOR FLOWERS.

WHEN, the other day, pacing alongside the flower borders with an old friend and well-known gardener, he remarked that there was an immense amount of staking looming in the near future. "Not so," I replied, and pushing up the string that encompassed the stems of one plant, I showed him how very simply and yet how efficiently a strand of string wound loosely round a plant was sufficient to preserve it in the upright position without the aid of a stake. The staking of herbaceous plants is to a very large extent a delusion, and beyond a few that cannot be managed without the support of one or more stakes, the great majority perform their delightful functions all the more satisfactorily unstaked. Those that would give way under the stress of a

About Dahlias.—Just at present our Dahlias are receiving the one necessary attention they need to keep them right for the whole season. This is effected not by means of stakes, but with stout, hooked pegs, or more usually with pieces of Snowberry bent like a hairpin, with which a selected number of shoots are pegged to the ground. As a rule, this is a far more effective manner of treating Dahlias for decorative purposes than the use of any number of stakes and ties. You will remember how that all-round florist Mr. William Cuthbertson mentioned at a Dahlia Conference that the finest display of Dahlias he had ever seen was what he termed a hedge of them in the gardens here. These were produced without a single stake—merely by once pegging down.

Pruning Hardy Flowers.—One should never be afraid to use the knife when obviously needed, which happens very often throughout the summer and autumn. Repeated prunings keep such a vigorous plant as *Anchusa italica* in due bounds,

THE ROCK GARDEN IN JUNE.

THERE are two of Loudon's gardening rules that seem most applicable to the rock garden at this season, viz., (1) "Never pass a weed without pulling it, unless time forbids"; and (2) "Let no plant ripen seeds, unless they are wanted for some purpose, useful or ornamental, and remove all parts that are in a state of decay." Both are common-sense rules, but a point that is sometimes overlooked is that certain rock plants are very attractive when fruiting. Take, for instance, the Pasque-flower (*Anemone Pulsatilla*), which at the present time is very attractive by virtue of its heads of downy seeds, and the same may be said of the light, feathery heads borne by *Geum triflorum*. While many rock plants are now passing out of bloom, there are, happily, scores of others to take their place. The rock garden should be in the height of its beauty in June. The large family of Mountain Pinks are now at their very best. *Dianthus plumarius* is one of the best and most showy of them all, while others worthy of special note are *D. cæsius* (with bright pink flowers about four inches high), *D. deltoides* (of a deeper hue), *D. neglectus*, *D. alpinus* (with large, expanded flowers borne close to the ground) and *D. Tenorei* (with white flowers on slender stems). Some of the alpine Pinks are difficult or even impossible to identify, for they are so freely crossed by bees, and self-sown seedlings are common. The mention of bees serves to remind one that certain flowers are much more favoured by their visits than others. The bees are never tired of visiting the small pink flowers of *Thymus odoratissimus*, and so long as this remains in flower the bees are always in attendance.

Saponaria ocymoides, a plant belonging to the same Natural Order as *Dianthus*, is now flowering in profusion. It is a pretty trailing species, with small leaves and bright pink flowers, and is seen to best advantage when allowed to overhang the rocks.

In shady places *Ramondia pyrenaica* and *Arenaria balearica* look charming when grown together, the former, with purple flowers, standing out from vertical rocks; and the latter, with its white, starry flowers, creeping close to the surface of the rocks over which it grows. *Veronica Teucrium dubia* and *V. orientalis* make low carpets of deep blue, while the yellow *Achillea tomentosa* forms a suitable companion to the white-flowering species *A. Oeristii* and *A. Huteri*. *Antirrhinum glutinosum* and *Helichrysum bellidioides* are excellent June-flowering subjects. Both creep among the rocks, and when overhanging a boulder are never so happy. Sun Roses, Rock Roses and Saxifrages each contribute to the floral beauty of the rock garden in June; and while space does not permit the mention of others, reference must at least be made to *Saxifraga pyramidalis*, with erect sprays of bloom 1 foot to 4 feet long. It is appropriately known as the Queen of the Saxifrages.



A JUNE SCENE IN A BEAUTIFUL ROCK GARDEN.

moderate gale need no more than a strand of stout string, while a larger number than one would think are best left to themselves. All the border Lilies, such as *Martagons*, *tigrinus*, *excelsum*, *croceum*, *candidum*, *pardalinum* and *chalcodonicum*, need no support. Many composites growing in old masses ask for support, which, when grown in single-stemmed pieces, planted annually, are vastly better left to themselves. None of the large family of decorative *Aconitums*, nor the *Senecios*, nor *Astilbe*, nor *Bocconia* need be staked. Some may not grow quite upright, but that is not in the way of a fault. How horrid it is to see such a distinctly beautiful plant from base to summit as a Japanese *Anemone* subjected to the indignity of stick and tie, even if the support be green-painted, varnished and finished in gold! It is worth notice, too, that seedlings of certain plants, such, for instance, as *Delphiniums* and *Lupinus polyphyllus* in variety, that must be staked when old, need no support.

and at the same time promote the production of more flowers over a longer period. *Lupinus polyphyllus* and its hybrids also produce spikes in long succession if the precaution of removing the older spikes before they are flowered out be taken. It is too long to leave them till the seed-pods are being filled and all the flowers on a spike are withered. To be successful with many of our border flowers, one must be a little bit removed from timidity. Thin where necessary, prune with an eye to the future as well as the present, and never delay easing a plant that is worthy of it of flowers, either in spikes or otherwise, even though their removal may for a few days slightly lower their decorative value. Such a free-seeding plant as the bedding *Viola* should frequently be picked over, removing every old bloom, whether withered or approaching that condition. This will ensure a long extended period of flowering.

Prestonkirk, N.B.

R. P. BROTHERSTON.

THE COLLARETTE DAHLIAS.

IT is time to plant out Dahlias, and to those who have wearied of the stiff and heavy show varieties, the new Collarette type specially appeals. This is a distinctive type of single Dahlia, having an inner circle of small florets issuing from the base of the yellow central disc, and edged on the outside with petals of every shade of colour and form. It is altogether an advance on anything hitherto seen. The flowers are borne on long stalks well above the foliage, and are most useful for decorative purposes, lasting, when cut, a full week in water in a cool room, while their long stalks add to their usefulness and charm.

Freedom of Flowering.—From all those who have grown these Collarette Dahlias one hears nothing but praise. It seems exaggeration to speak of them as "perpetual flowering," yet such was the fact last autumn. For two months they were a constant source of floral wealth, and the beds were radiant with flowers when all else save Michaelmas Daisies had lived their span. Until cut down by frost they can be relied upon to yield a profusion of blossom; hence their value either in separate beds or in clumps in the herbaceous border.

Culture.—The culture needed does not differ from that required by all Dahlias, which revel in a rather heavy, clayey loam, thoroughly well worked. Whether the soil be heavy or light, deep cultivation is necessary, and thus ensures proper drainage. A liberal supply of well-decayed manure should also be worked into the soil, and if this has been done in the autumn, so much the better. However, if the Dahlias are to be planted in the border, this may not have been possible. Take, therefore, the site chosen, dig a fairly large hole, and well mix the manure with the bottom soil before planting. Dahlias rarely get over-manured.

Situation and Planting.—Being bushy in form, moderate in height and requiring only the support afforded by ordinary thin canes, the Collarette Dahlia is suited for any position, flowering profusely between shrubs or disporting itself in lonely grandeur in circular beds on lawns, while it is most useful in the herbaceous borders, forming a blaze of colour in late autumn when flowers are scarce. It is advisable to buy plants (knocked out of pots) direct from one or other of the firms that have specialised in this new type. Most, or all, of the firms who specialise in Dahlias now list them, so that there should be no difficulty in obtaining plants. Turn the plant out of the pot, taking care to preserve the ball of

soil intact, place it in the prepared hole, and tie it to the cane (already in position) with a piece of raffia. The after-attention required is very little. Add more canes as needed, and tie in the growths. Slugs and insects—the usual pests—must be expected and destroyed at the onset, and then the grower may feel confident of a harvest of flowers until cruel King Frost casts his withering hand around.

Varieties.—The following half-dozen have been proved of sterling worth and can be recommended, but others can be selected from the raisers' catalogues to suit individual taste. None of them is very expensive to purchase.

Balmoral.—A puce colour with a white collarette. A good grower and very free flowering.



AN EFFECTIVE GROUPING OF SAPONARIA OCYMOIDES, A BEAUTIFUL PLANT FOR THE ROCK GARDEN.

Queen Bess.—A scarlet with yellow collarette.

Frogmore.—The finest I know. Yellow and vermillion, with a yellow collarette. This leaves nothing to be desired in form and colour, while it is very vigorous and a perpetual bloomer.

Princess Louise.—A rich crimson flower with broad petals and white collarette.

Negro.—A maroon with white collarette. Is of lovely form and colour; very free and effective. Probably the best word to describe

Henri Farman, a bright vermillion edged with primrose, with straw collarette, is "grand"—the word used by everyone on beholding a newly opened flower of this variety. S. M. C.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

THE FINAL POTTING OF THE PLANTS.

BEFORE June ends, the whole of the plants must be placed in their flowering pots, not only those intended for flowering in October and November for exhibition purposes and the furnishing of the conservatory, but also those that are to yield flowers in December and at Christmas. There are several points in connection with the treatment of late-flowering varieties that amateur cultivators ought to carefully note. One is the advisability of getting the plants well established in their large pots in good time, as we should remember that feeding at will can be done later on. Another important point is the stopping of the shoots also in due time. It is a great mistake to stop the shoots late, as very frequently the resultant blooms are entirely lacking in substance. Often I have seen them with two or three rows of petals on one side of the opening buds only.

The Final Potting is regarded by some cultivators as the principal one, and also the chief thing that can be done in regard to the treatment of the plants. That it is important I admit, but really not more so than the previous repottings, as, unless the work in connection with them is equally well carried out, poor plants would result now, and no amount of care in doing the final potting would convert them into splendid specimens. In carrying out the work, care should be taken to ensure sound drainage, clean crocks and pots both inside and outside, a well-mixed compost and pots of suitable size. Weakly growing varieties should be potted in 9-inch pots, and stronger growers in 10½-inch ones. If larger pots are used, place two plants in each, and take on two main stems on each plant if they are being grown for the production of exhibition blooms—four blooms to a pot instead of the orthodox three. By following this

plan the general health of the whole collection will be maintained at a high standard.

The Soil.—Fibrous loam must form the bulk of the compost. If the loam is rather heavy, use more leaf-soil and sand in it than if it is of a light nature. A pint of bone-meal to a bushel of the compost, a 6-inch potful of soot and a similar quantity of wood-ashes to the bushel, with a good concentrated chemical dressing according to the directions given with it, should complete the compost for the final potting. Do not ram the soil very firmly; there is the medium course, and this is best, taking the potting of the whole collection of incurved, Japanese and single-flowered sections respectively. The wood may be too

hard. There is only a given time for the growth of the plants, and if the stopping or the natural breaks are right, the growths made afterwards will mature sufficiently. Put in some of the coarser parts on the crocks, and use the remainder in due proportion to the small. Leave space at the top for top-dressings, watering and feeding. A 2-inch space will be sufficient, and nearly the whole of this will be filled by light top mulches applied every ten days after the end of July, or the third week or so in that month. After potting, space out the plants in rows north and south if convenient, and place the stakes to them. If the weather proves bright and dry, syringe the plants twice every day, and be careful not to overwater the soil; then new roots will permeate it very soon.

AVON.

SEASONABLE NOTES ON VEGETABLES.

Celery.—Plant firmly in well-prepared trenches, lifting the plants carefully with a good ball of soil attached to the roots of each. Failing showers, keep them well watered in the trenches, and dust the plants occasionally with soot as a preventive of the Celery fly.

Asparagus.—Continue to cut evenly over the beds until the end of this month. Thoroughly soak the beds occasionally with liquid manure, which not only improves the present "grass," but assists the plants for next season's crop. If in an exposed position, secure the strongest plants by pieces of string on each side of the bed to prevent them being broken by wind. A few short Pea stakes thrust in among the plants will provide useful supports.

Cucumbers in Frames will now need careful attention, especially if they have been fruiting some time, and will require stimulating for future crops. Prune rather severely any growth that has borne freely. This cutting away of old haulm and leaves will provide more light and encourage new growth, especially if the plants receive a good soaking of liquid manure and a mulching, 2 inches thick, of partly decayed manure, leaf-mould or fresh loam, adding a handful of soot. This will encourage the growth of surface roots. Keep the frame somewhat closer for a time, closing it early in the afternoon with plenty of sun-heat, first sprinkling the foliage with tepid water. Pinch out the point of each new shoot above the second leaf, and if fruits show freely, thin these for the benefit of the plants in the future, as too many plants are ruined by overcropping.

Ridge Cucumbers must have attention. Those previously raised in pots should be

planted out on a heap of litter and leaves, with a surfacing of old potting soil, encouraging the growth by the aid of hand-lights, or even pieces of glass laid over bricks. Sow seeds where the plants are to fruit for a succession. Mulch the surface to encourage freedom of growth.

Radishes require much attention to maintain a regular succession of succulent roots. Small weekly sowings are better than sowing at longer intervals. Nothing is finer than the French Breakfast type for flavour or quick growth. During dry weather well soak the soil before sowing the seed. Afterwards apply a light shading until the plants are

of growth, which will be found an advantage next year.

Peas.—Continue to sow late sorts like The Gladstone, Goldfinder, Late Queen and Ne Plus Ultra in previously watered drills. Well soak and mulch all plants growing in rows. Where extra fine pods are required, thin judiciously, and top the haulm when a sufficient crop is assured. Stake early to encourage upright and robust growth, and do not forget that the more moisture that can be given to the roots, especially liquid manure, the better will be the result.

Runner Beans now growing freely should have attention. Train the haulm thinly up the stakes, removing surplus lateral growth. Water well, syringe in the evening, and mulch between the rows.

Lettuce should be often sown. On the Celery ridges is an economical method. Water the drill before sowing. Directly the plants are large enough to handle, thin out and transplant, thus having an equivalent to two sowings. Moisture at the root and overhead in abundance is the only secret in obtaining succulent Lettuce.

Onions need attention in their various stages. The Rocca and Leviathan types should not be overfed yet, lest too many plants run to seed. Keep a sharp look-out on all batches for mildew. Dust with wood-ashes and soot as a preventive. The outdoor-sown batch will require thinning where large bulbs are required; but for ordinary use and for pickling no thinning is required, especially if thick sowing has been avoided. Keep the hoe busily employed between the rows.

E. MOLYNEUX.

Sawmire, Hants.



THE RARE AND BEAUTIFUL IRIS LÆVIGATA ALBA. A WHITE-FLOWERED FORM OF A LITTLE KNOWN SPECIES.

IRIS LÆVIGATA ALBA.

It was recently our good fortune to see, for the first time, this rare and beautiful Iris flowering in the vast collection of Irises in Messrs. R. Wallace and Co's nursery at Colchester. The flowers are clear ivory white, with a faint shading of mauve at the throat. Growing about two feet or less in height, it is a variety that at once arrests attention by virtue of the purity and refinement of

the flowers. It was not surprising that it should have been granted an award of merit by the Royal Horticultural Society at a recent meeting. It should be pointed out that it is quite distinct from the lævigata alba of gardens, which is really a variety of sibirica orientalis. Neither must lævigata (true) be confused with the species Kämpferi, from which in foliage and form of flower it is quite distinct. Unfortunately much confusion still exists between Iris lævigata and I. Kämpferi. That they are distinct in flower and foliage may be seen from the illustration of the white-flowered form of the typical I. lævigata.

above the surface. Sprinkle them in the evening for preference.

Turnips are a difficult crop to manage during a spell of drought. Choose a shady place; a north border, for example. Water the soil before sowing, and, as soon as the plants appear above the soil, dust them over with soot and wood-ashes. Thin out the plants early.

Rhubarb should receive encouragement for its welfare next year by the prompt removal of seed-stems, and be given a thick mulching of partly decayed manure, the juices of which will benefit the roots and encourage freedom

of growth. It was not surprising that it should have been granted an award of merit by the Royal Horticultural Society at a recent meeting. It should be pointed out that it is quite distinct from the lævigata alba of gardens, which is really a variety of sibirica orientalis. Neither must lævigata (true) be confused with the species Kämpferi, from which in foliage and form of flower it is quite distinct. Unfortunately much confusion still exists between Iris lævigata and I. Kämpferi. That they are distinct in flower and foliage may be seen from the illustration of the white-flowered form of the typical I. lævigata.

GARDENING FOR BEGINNERS.

HOW TO GROW CELERY AND LEEKS.

AS both of these popular vegetables thrive best in a deep, friable loam, the cultivators who possess such have a great advantage over others who have to deal with a stiff, adhesive loam which can only be satisfactorily worked a few hours after a shower of rain, and which pans down very hard if worked while in a very moist condition. Cultivators will now turn their attention to the planting of Celery and Leeks, and look for their reward next autumn and winter. Trenches may have already been made and manured ready for the plants. If the soil in the bottom of the trench is found to be set hard, dig it and break up any lumps before putting out any plants. I have found it a capital plan to gather up some old potting soil, road

enough. The top soil removed should be placed on one side, and the spit below it on the other side. Then return the good soil and the manure, and thoroughly mix both before putting in the plants.

The Plants and Planting.—Dwarf, sturdy plants possessing plenty of roots, such as shown at No. 1, Fig. A, are the best if from 5 inches to 9 inches in height. Very tall, weakly specimens with few roots, resembling No. 2, are not good ones. They receive a severe check when disturbed, and do not recover for a long time after planting in the trenches; in fact, nearly all the tallest leaf-stalks perish. No. 3 denotes a fine transplanted Leek, and No. 4 a poor one as drawn from the seed-bed. Single rows of both Celery and Leeks should be planted as denoted by the crosses, No. 1 in Fig. B, and double rows of the former in zigzag fashion 10 inches apart, as shown by the small circles, No. 2. No. 3 also shows them in the trench with neat ridges, Nos. 4, 4, on which temporary crops, such as Lettuces or Dwarf Beans, may be grown. A sectional view of the Leeks and trench is shown in Fig. C. These plants are gross feeders, and so plenty of rotted manure should be mixed with the soil quite a foot deep for the roots to make a good start in, as shown at No. 1, No. 2 being undisturbed soil. In every case water thoroughly, and maintain the soil in a moist condition. It is also beneficial to the plants if a surface mulch of loam, leaf-soil and manure is put on an inch deep at the time of planting.

G. G.

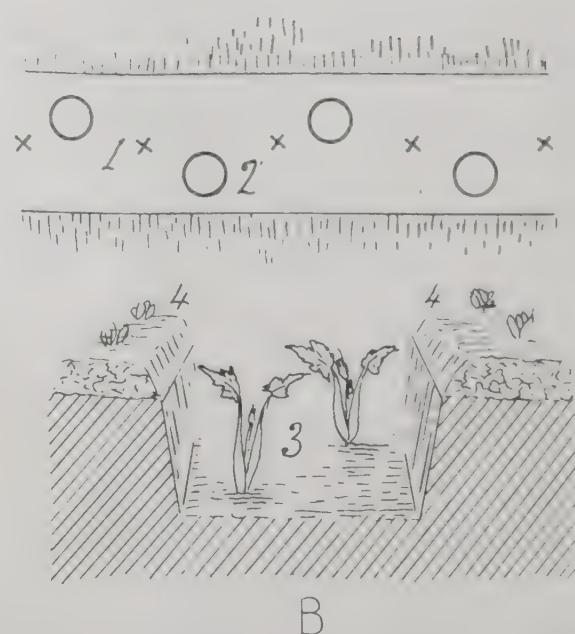
A VIOLA FOR THE ROCK GARDEN.

ONE of the most brilliant of our new rock garden Violas is the variety we call Solitude. It is of the *gracilis grandeur* class, and has a very dwarf, neat habit, with small, pointed leaves, and carries its hordes of blossoms well erect upon sturdy foot-stalks. It is long in blossom, having been in flower throughout March, April and May, and is still as full as ever without any attention, and promises to go on for a considerable time. It will be noted that, belonging to the improved *grandeur* type, the new-comer will prove of the utmost value for rock garden work, also for bedding, as few Violas flower like this section, and none retains so well as these that splendid dwarf habit which is such a tremendous asset in their favour. But, after all, it is the colour of Solitude that tells—a deep mountain blue, rich and unsullied, that carries one in thought at once to the clear skies and the distant blue of the high hills. The appealing intensity of Solitude is very real, and if we can get it on the slopes it will attract more than *gracilis* or *grandeur*, or, indeed, to my mind, more than any other blue Viola. Its name Solitude was born of the mountain blue of its colouring, unusual in its serene beauty.

P. S. HAYWARD.

SHIRLEY POPPIES AS CUT FLOWERS.

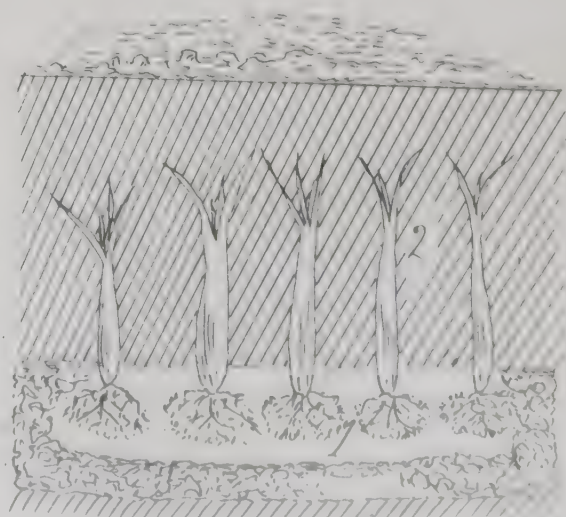
WHEN inspecting the various exhibits at flower shows, one has frequently been both sorry and surprised at the comparatively small number of competitors in classes for the beautiful Shirley Poppies—of such easy cultivation, and for whose



THE METHODS OF PLANTING SINGLE AND DOUBLE ROWS IN A TRENCH ARE SHOWN HERE.

introduction we all owe a debt of gratitude to the Rev. W. Wilks, the able hon. secretary of the Royal Horticultural Society—the obvious deduction being that this pretty annual is not so much grown, or if grown, cut and used, as it deserves to be. The reason lies probably in the fact that the cut blooms do not, in the ordinary way, last well in water, owing to the “bleeding” process which ensues; hence their apparent comparative unpopularity. This disadvantage can, however, fortunately be remedied with a minimum of trouble if, immediately after cutting, the stalks be immersed in half an inch of boiling water for two minutes, then placed ordinarily in cold water. It is best, of course, to cut the blooms before they are fully expanded, and a method of assistance in this direction is to crack the outside covering of all vertical buds the previous evening; this ensures having young blooms next day. By the practice of the above plan the erroneous—yet common—impression that Shirley Poppies cannot be made to last will be dispelled, for they will then keep several days, while, incidentally, their decorative value will be increased. This is the method I have always adopted when exhibiting Poppies, with successful results.

B. W. LEWIS.



SECTIONAL VIEW OF A WELL-MANURED TRENCH, SHOWING THE YOUNG LEEKS PLANTED.



DIAGRAMS TO REPRESENT GOOD AND BAD PLANTS OF CELERY AND LEEKS AT PLANTING-TIME.

scrapings from roads not frequented by motor-cars, sifted leaf-soil and material from the surface of old hot-beds, and, having scattered the mixture in the trench, dig it in and so provide a suitable rooting medium for the young plants.

About Trenches.—I am quite sure that cultivators make their trenches too deep. The best soil—that about sixteen inches from the top—is taken out and placed so as to form ridges between the trenches. Manure is then put in, and the plants in it and the cold subsoil. The good soil taken out is used mainly for earthing-up—blanching purposes. Some cultivators do return a portion of the good soil before the plants are put out. The cultivator should be guided a good deal by the depth of rich soil he possesses as to the matter of trench-making; but even in the case of very good, deep soil, the trench should not be deeper than 18 inches before manure is put in. In poor, shallow soils 9 inches is deep

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Grape Lady Downe's.—The final thinning of these Grapes should be accomplished as soon as possible. Remove all seedless berries, and allow sufficient space for the berries that remain to grow to their full size without coming in contact with each other. Examine the border, and if necessary give a good soaking of weak liquid manure, after which the ventilators should be left slightly open during the night. As the season advances, the ventilators should be opened early in the morning with a view to clearing off condensed moisture.

Tomatoes.—Plants which have set a full crop may have their tops pinched out, and should be assisted with some stimulant; either liquid manure from the farmyard or Peruvian Guano washed into the soil will suit them well. Keep the side shoots pinched off, and if the foliage becomes too strong, some part of it may be removed. Plants for succession may be potted into their fruiting pots and grown in some well-ventilated structure where air can be admitted night and day. If house room is not available, these plants will set their crop quite well in the open if staked and secured to a wire in the same manner as Chrysanthemums. Pot moderately firmly in good turfy loam, and place a few half-inch bones over the corks.

Plants Under Glass.

Spring-Struck Plants of *Dracæna*, *Croton*, *Pandanus* and *Begonia* should all be potted up as soon as ready and grown in a temperature of 75°. Keep a watch for insect pests, which must be destroyed as soon as they appear, or the plants may soon become deformed in consequence.

Cinerarias.—If seeds were sown in April, the plants will now be ready for potting into 4-inch pots. They should be grown in a cold pit facing north, and protected from strong sun when they become established in the fresh soil.

Chinese Primulas.—The early batch of these should now be ready for potting into 4-inch pots. These plants succeed best when grown in a cold pit on a bed of ashes until the autumn, when they should be removed to a cool, well-ventilated house within a foot of the roof glass. During the summer Primulas will benefit by exposure to night air, and the lights may be removed with advantage during warm evenings, but not during heavy rain. Primula seeds may still be sown to produce plants for spring flowering.

The Flower Garden.

Watering.—If the weather is dry, constant attention should be given to recently planted subjects, for, if allowed to suffer from want of moisture at the roots, no amount of care afterwards will restore them to their natural beauty. After watering has been thoroughly accomplished, the soil between the plants should be carefully hoed, and this will act as a mulching to the roots. In places where a mulching of horse-manure can be applied, this will be of great advantage to the plants; but before this is applied it should be placed together for fermentation and allowed to remain for a few days. Plants in vases with restricted root space and full exposure to sun and wind should receive daily attention in this respect, or many of them may cast their leaves and become unsightly.

Spring Bedding Plants.—Wallflowers, Polyanthuses and other plants intended for spring bedding should be transplanted from the seed-beds to a convenient plot, in order to produce good, stocky plants when the time arrives. Allow sufficient space between the plants to admit plenty of light and air, and do not allow them to suffer from want of water during the summer.

The Hardy Fruit Garden.

Raspberries.—Plants which are swelling their fruits will benefit by a good soaking of manure-water, and, if not already done, the bed should be mulched with farmyard manure. Suckers which are not required for next season's crop or for autumn planting may be removed, in order to admit sun and air among the plants. As soon as the fruits begin to colour, the bed should be carefully netted to protect them from birds,

Strawberries.—Late batches of Strawberries should receive an abundant supply of water at the roots, in order to swell the fruits. If once the plants are allowed to suffer from want of water, the prospect of a satisfactory crop will be much reduced. Net the plants as soon as the fruits begin to colour.

Wall Trees.—The leading shoots which are necessary for extension should be carefully tied or nailed in the direction they are required, but no general stopping of the growth should take place for another month. Apricots which are planted on well-drained borders must receive a plentiful supply of water at the roots. Examine the trees for maggots, which should be destroyed at once. Peach trees ought to be syringed early in the afternoons, and if there are signs of red spider or other pests, a little Quassia Extract may be mixed with the water constantly to keep them in check. The final thinning of the fruits should take place as soon as possible, leaving the best-placed fruits and nothing beyond a fair crop.

The Kitchen Garden.

French Beans.—Frequent small sowings should be made in the open garden, choosing ground which has been trenched during the winter. As growth advances, a mulching of decayed manure will be of great benefit to them, especially if the weather is dry.

Carrots.—A sowing of Stump-rooted Carrots may now be made for use in the winter and spring. If the soil is dry, the drills should be watered freely in the evening and the seeds sown the following morning. If a crust has been formed by the water, this should be slightly disturbed before the seeds are sown.

Spinach.—This is an important summer crop, and requires a good deal of attention during dry weather. At Frogmore we sow weekly in cold pits during the summer, and water freely every day. By this means we keep up a constant supply of green leaves through the summer.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Asparagus.—In most cases it will not be wise to cut after this date, although I have known several gardens where cutting was continued until the beginning of July. These cases, however, are exceptional; indeed, if the beds are not in a very good state, it would be better to stop even much earlier than the middle of June. It must be remembered that next season's crowns have to be formed by the present year's growth. When cutting ceases and the young growths come away, care should be taken that these are not shaken by strong winds, otherwise the stems break off at the base, which will weaken the crown. To prevent this, they should be supported with small stakes and connected with tarred string.

Dwarf Beans.—A sowing made out of doors now will for all practical purposes be sufficient to last the season. Should the ground be dry and there be no immediate sign of rain, it will be advisable to soak the seeds in water for several hours before sowing, and if the weather continues dry, they will be all the better for an occasional watering. For this crop thin out the plants to about a foot apart.

Peas.—In many districts it will not be safe to sow after this date, at least in the open, and even a sowing made now may to a large extent be precarious. For the most part I advise sowing early varieties for late cropping; still, I was much impressed a year ago with a very fine crop of Peas quite late in the season, which I was informed was Chelsonian, and it seems it can always be relied on. Seeds sown now should be soaked in water for an hour or two previously. Avoid thick sowing, which would assuredly encourage attacks from mildew.

The Flower Garden.

Dahlias.—These will now have got nicely started away in their flowering quarters, and every care should be taken to hasten them on till the flowering stage. As it is scarcely possible to overfeed them, a little short farmyard manure spread over the surface will be very beneficial. Their season, as a rule, is all too short, and should

their growth be retarded by any neglect, it is just possible they may be cut down by frost before they come into bloom. It must be remembered that earwigs are particularly fond of Dahlias, and every means should be taken to have them trapped. This is best done by placing a little dry moss in a small pot and putting it inverted on the stake. The pots must be examined morning and evening and the earwigs destroyed. Do not wait until they have done some damage, but commence trapping at once.

Flowering Shrubs.—A great many of these will have passed out of flower, and any pruning that is necessary should be done forthwith. In doing so, first cut away all decayed and sickly branches, and afterwards cut back the strongest shoots, so that when completed the shrub will have the appearance of a renewed lease of life.

Plants Under Glass.

Winter Stocks.—A start should now be made by sowing a small quantity of seed of these delightful winter and early spring flowering plants. The seeds may be sown either in small pots or boxes, and placed in a cold frame and brought on very quietly. Successive sowings can be made till the end of July. The Stocks most suitable for this work are the Beauty of Nice type and that lovely lavender Emperor, Augusta Victoria. During the past season we had a house devoted to them, and they were a sight not readily to be forgotten. Many of the spikes were over two feet in length. I find they travel well and last a long time in a cut state.

Coleus thyrsoides.—This striking greenhouse plant is fast becoming popular, partly from the fact that it possesses flowers of a clear blue shade, a shade which is very much in evidence at the moment. The plant itself, however, is handsome, and, blooming as it does in the winter, it has an additional attraction. Cuttings should be inserted at once, and, like other members of this family, they root quickly. After being potted on they ought to be pinched at least twice to form nice bushy plants. Keep them growing on in a moderate temperature where they will have plenty of light and air.

Solanums.—These one-time favourite fruiting plants will now be ready for their final potting, and in doing so see that the soil is moderately rich. For obvious reasons the pot should not exceed 6 inches or 7 inches in diameter. In favoured districts these plants may be grown outside during the summer months, but in colder districts better results will be obtained by growing them in frames.

The Hardy Fruit Garden.

Protecting Strawberries.—If this has not been done, no time should be lost in having the nets put over the various plantations. This work is often delayed too long, on the plea that the fruits are not yet colouring. My experience is that the birds often attack them before they get to that stage, and it is much more difficult to keep the birds out after they have had a taste than it would have been had the fruits been protected earlier.

Raspberries.—These should receive a heavy mulching at once if this has not been already done. Before doing so, clear the ground of weeds, and thin out the suckers where they appear too close.

Fruits Under Glass.

Peaches.—In houses where the fruit is colouring a drier atmosphere should be maintained, and to enable the fruit to be well coloured all round, it will be necessary to put the leaves aside; indeed, if time permitted, each fruit should be turned up to the light by placing a small piece of lath under it. In the earliest houses where the fruit has been gathered, the trees should be heavily syringed to keep the foliage healthy, and see that the border is in a moist condition.

Vine Madresfield Court.—Water should never be given to the border until it has been previously tested. This should, of course, apply to all fruit borders under glass, but more particularly to those containing this fine variety. If the border is too wet, the berries will be liable to split; this usually occurs just before they commence to colour. Another cause of splitting is the berries being too tightly packed. In any case where splitting is observed, keep a free circulation of air night and day.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopdown Gardens, South Queensferry, N.B.

BOOKS.

The Ethics of Rebuilding.*—Mr. Weaver, in the prefatory note to this volume, writes: "The welcome given to 'Small Country Houses of To-day' would seem, if I may believe my correspondents, to have been due in no small measure to chapters which described old houses repaired and enlarged. This suggested that a second and uniform volume, dealing wholly with the treatment of old houses, whether cottage or farm, house or small manor house, would be useful to the increasing number of people who like the atmosphere of age in their homes." The author's previous volume in the same series was a deserved success, and we believe this book will be accorded a welcome at least as great as that enjoyed by its predecessor. The many difficulties which are inherent in the repair and enlargement of an old house are very thoroughly dealt with in this book, which shows how forty houses of five centuries have been given a new lease of life. Detailed descriptions reveal how they have been re-equipped as modern needs demand, without destroying the witness they bear to the old traditions of building. Incidentally the author has shown in how many cases the records of modest little houses have been preserved and how intimately their local story is woven into the larger fabric of national history. To all who contemplate the alteration of an old house and desire to achieve it in the right spirit, this book will be an indispensable guide.

My Garden in Summer.†—Mr. Bowles in "My Garden in Summer" has written a book more interesting even than "My Garden in Spring," captivating though that is. The writing throughout is brisk and breezy, while it is replete with amusing passages which make it the more piquant. One which has "fetched" us is the following: "The Hawthorias, with their starry rosettes, look as if sprinkled over with pearls or a carefully picked out handful of white hundreds and thousands, which could only have been the work of the little girl who produced a farthing in the sweet-shop, saying, 'A farthing's worth of hundreds and thousands, and please pick out all pink ones.'" Mr. Bowles tells his readers of plants which many of them may never have heard of, and accordingly whets their desire to grow them. It is rather a surprise to us to find the author, who does not as a rule shrink from expressing his opinion about many plants, writing favourably of Rose Rayon d'Or. We admit it has perfect mildew-proof foliage and bears some beautiful flowers; but for how long can it be grown? Our experience of it is that when it does not die outright the first

season after planting, it dies by early instalments. We are glad to see that Mr. Bowles has so high an opinion of Rosa Moyesii—too seldom seen in gardens—a good doer, practically evergreen, and a veritable glory throughout June. By the by, we know of no hybrid raised from it yet. On pages 72 and 73 Mr. Bowles tells his readers of the lovely Roses he saw in bloom at Modane last year. What a pity he did not mark them then and pay the spot a visit in lifting-time! His garden would have been the richer for it, and so would some of ours, as Mr. Bowles is the very soul of generosity. In reading the book one almost feels one's self walking round the author's garden with him, so realistically is it written. Mr. Bowles is undoubtedly ever open-eyed and a keen observer of everything, whether it be a plant, an insect, or a bird. He is enthusiastic of Mont Cenis and its neighbourhood, as well he might be, for we know of no place more beautiful or more interesting from a plant point of view. Many who read this book will feel as we do—that we

either. The only reason why production continues must be on account of new cultivators joining the ranks of specialists, and to these the new writers who from time to time emerge into the public gaze make a strong, if not an overpowering appeal. It is to these, the extreme tyros, that the present volume devotes its fifty-five beautifully printed pages of Carnation lore. From the simplicity of the style and the unconnected grouping of the various items, one would not have been surprised to learn that the author had been keeping in view the horticultural schoolboy. And the very simplicity aimed at has been the means of leading him astray on more than one occasion; but that perhaps is rather on account of book composition being less in his way than the production of the sweetest of sweet flowers. One cannot judge of the utility of a book like this just because of these obvious facts—facts that stare one in the face in perusing the book. The teaching is in general to be commended, though why cuttings properly treated should require so long a time as six weeks

to become rooted is not very clear. [Other cultural items as well as the remarks on cutting and preserving the blooms when cut are to the point. Like other growers, Mr. Wootten has his special compost, which contains as much as one-third rotted stable manure to the loam. I should tremble for the future of Carnations given manure in these proportions; but perhaps the 3-inch potful of charcoal to the eight bushels of soil and manure is intended as a mild corrective. The timing of the blooming season by means of stopping is becoming an absorbing question, which the author leads one to expect to see solved in the list of varieties appended, but one is disappointed to find nothing of the kind when reference is made to the list. This is a serious omission. The volume is illustrated, showing blooms of

many Carnations, is nicely bound in art linen, and the printing is clear and good.—R. P. B.

PRELIMINARY REPORT ON THE WORK OF THE TULIP NOMENCLATURE COMMITTEE.

IN the autumn of 1913 an invitation was issued by the Royal Horticultural Society to the leading growers to send to Wisley for trial bulbs of their varieties of Tulips, with the names under which they respectively knew them. These were planted at Wisley, and on Monday, April 20, a joint committee of Dutch and English experts met to consider the early varieties, and again on May 6 and 7 to consider the May-flowering varieties. The committee consists of Mr. E. A. Bowles, M.A. (chairman), Mr. Krelage (vice-chairman), the Rev. Joseph Jacob, and Messrs. Barr, de Graaff, Hall, Hoog, Leak, Needham, Roes and Ware. Over four thousand varieties were examined,



A THATCHED SHELTER AT MR. F. E. SMITH'S HOUSE.

must alter our gardens and make them more like the author's. A persual of "My Garden in Summer" cannot fail to teach readers much they did not know before. It is apparently written with a good-natured desire to help them, and not with a superior didactic air we have met with in other books. From beginning to end "My Garden in Summer" is a book of kindness—characteristic of the author. It is charmingly written, original and full of information, while there is not a passage in it to which the most sensitive person can take exception. In a word, it is a book we cordially recommend to every horticulturist.

Perpetual-Flowering Carnations.*—Books on Carnations are becoming as plentiful as those on Sweet Peas, two flowers which are so easy to grow that it would be expecting too much to look for anything novel in a new volume on

* "Small Country Houses: Their Repair and Enlargement," by Lawrence Weaver. Country Life Library; 15s. net.

† "My Garden in Summer," by E. A. Bowles. London: E. and T. C. Jack; price 5s. net.

* "The Perpetual Carnation and How to Grow It Indoors and Out of Doors," by E. J. Wootten, Carnation Specialist. Manchester: Warren and Son, Limited. London: Simpkin and Co., Limited. Price 3s. net.

and their nomenclature and synonyms determined. The trials of the May-flowering varieties only will be continued in 1915, and growers are invited to send fresh bulbs—five of each variety—named. Bulbs will not be accepted later than November 1, 1914. Senders are asked to roughly designate their colour and the class to which they belong to facilitate the work of planting.

On each occasion the committee sat in conference and drew up recommendations for a classification. These will be reconsidered at a conference to be held at Vincent Square on May 13 and 14, 1915. It is then intended to prepare the final list of varieties and synonyms, and all recommended varieties will be definitely placed in one or other of the sections and subsections of the classification. This final list, with official descriptions, will be printed and published by, and at the expense of, the Royal Horticultural Society in conjunction with the Dutch Bulb Growers' Society in Haarlem. To make the descriptions short and clear, certain typical varieties will be selected, described, figured and named, so that others can be described by reference to them. Thus systematised, the colour, shape, base, and the relative length and breadth of the inner segments will be recorded.

The Council have adopted the recommendation of the committee to hold a show of Darwin and Cottage Tulips on May 14, 1915, for cut blooms only, in vases, for the purpose of enabling the Nomenclature Committee to decide on the synonyms of the varieties sent.

PRUNING DECIDUOUS FLOWERING SHRUBS.

THE correct pruning of many flowering shrubs has a great deal to do with their success or failure in our gardens. It may mean—in fact, it usually does mean—the difference between a most attractive border of flowering shrubs and just an ordinary border of shrubs serving as a screen with no particular beauty. Broadly speaking, flowering shrubs can be divided into two great groups, namely, those which flower during the spring and early summer, and those which produce their blossoms in late summer and autumn, which, if any pruning is required, should be attended to in early spring.

At present we are concerned with the first-named group, which includes the *Philadelphus*, *Ribes*, shrubby *Prunus*, the early-flowering *Spiræas*, *Deutzias*, *Forsythias*, *Kerrias* and *Diervillas*. The term "pruning" here is intended to include also the cutting out of old, useless wood and the thinning of the growths to admit air and light into the bushes, thus ripening the shoots, which will improve their floriferous character. At the same time, the shape of the bushes may be considered, taking off a long piece here and shortening a shoot elsewhere to maintain them as shapely specimens. The time to do this work is as soon as convenient after the flowers fade. This enables the plant to make ample new growth for the sun and air to ripen before the dull days of winter. It is quite impossible here to give any hard-and-fast rules respecting the amount of pruning necessary. Individual requirements vary so much, and the position the plants occupy in the garden may also need consideration. Some kinds flower more freely when pruned fairly

hard. These include *Forsythias*, *Prunus triloba* flore pleno, *P. sinensis* flore pleno and *Philadelphus Lemoinei* erectus. With another group, notably *Deutzias*, *Kerrias* and *Spiræa van Houttei*, it usually pays to cut the older growths entirely down to the ground, leaving the remainder to develop their full length. Other bushes are improved by cutting the ends of the flowering branches back to where young shoots are pushing out, also cutting out a few long growths when too thick. Instances of this treatment are *Philadelphus coronarius*, *Spiræa arguta*, *S. prunifolia* flore pleno, and *Diervillas*.

At the present time the Lilac bushes, admittedly one of our most beautiful flowering shrubs, require attention. All the old faded flowers should be cut off, and at the same time thin out the quantities of young shoots which are growing rapidly. Treatment such as this, in reducing the number of growths, admits more sun and air to the bushes, with the consequent development of much better flowering wood for next season's display of blossoms. Another matter which may have attention at the present time is the mulching of deciduous flowering shrubs with well-decayed manure, also watering if the weather is dry. Should the manure be considered objectionable, there is the alternative of watering liberally several times with liquid manure. A. O.

WILD FLOWERS FOR THE GARDEN.

WHEN thinking of wild flowers for the garden we should on no account forget the Woodruff. If there is a damp, shady place where little will grow, the Woodruff will cheerfully spread over and lighten it with its tufts of bright green leaves and snowy white flowers. The Trollius, or Globe Flower, is a fine, handsome summer plant and worthy of a place in any garden. If annuals are wanted, then why not try a collection of British Poppies? One cannot, of course, get the great diversity of colouring as in Shirley Poppies, but collecting the seeds of the different kinds, the Pale Poppy, the Round Rough-headed Poppy, the Long Smooth-headed Poppy, the Opium Poppy, and so on, will be a work of great interest. Then there are the Crane's-bills. They deserve to be represented in every garden. First, one might have the Dusky Crane's-bill (*Geranium Phæum*), flowering in May and June; then, in sharp contrast, the beautiful bright blue Meadow Crane's-bill (*Geranium pratense*), and the Bloody Crane's-bill (*G. sanguineum*), with large purple flowers and deeply cut leaves. A place should be found, too, for the common purple Foxglove, though, unless there is some bare spot where it can spread at will, it must be kept carefully within bounds. Another plant to have in small quantities is the Borage, also its two cousins, the Viper's Bugloss (*Echium vulgare*) and Alkanet (*Anchusa officinalis*), all three of which have bright blue flowers. If there is a wall to be considered, plant Red Spur Valerian (*Centranthus ruber*) in the crannies. Once it gets a firm hold, it spreads quickly and flowers on from June to September. The Rose Bay (*Epilobium angustifolium*) should on no account be forgotten. It makes a splendid show if given a rather damp position, but here again it must be kept in order, or it will choke everything else. One must not linger too long over the summer

flowers, attractive though they are. The early autumn is very well supplied with blossom, too. All the different Campanulas or Bellflowers are well worth growing, and so is the beautiful blue Chicory (*Cichorium Intybus*), which will go on until it gets nipped by the frosts of October. There are two bulbous plants for the autumn which one ought to find room for—the Meadow Saffron (*Colchicum autumnale*) and *Scilla autumnalis*, or Autumnal Squill. The first named is very like a Crocus, with flowers of an indescribable shade between pink and purple. It is not common, but grows freely where it is established. One peculiarity about it is that its leaves and seed-pods do not appear until the spring, though the flowers are out in September and October. The Autumnal Squill is a rather larger plant than the better-known spring variety, and its flowers are not quite such a beautiful blue, but, none the less, it is a valuable plant for the autumn garden.

For the actual winter, one should have the two Hellebores, *Helleborus viridis* and *H. fœtidus*. The former has flowers of a bright, clear green, while those of the latter are rather darker and of a purple hue. They are closely allied to the Christmas Rose, and if planted in a sheltered position will bloom in the very depth of winter. It is as well to cultivate berried plants for the winter, such as the Stinking Iris and Wild Arum, both of which have large heads of bright scarlet berries in the winter. All of these are plants suitable for an average garden without any special features, but, of course, if one has a rock garden or a pond, one can specialise still further. For the rock garden one can make a collection of British Saxifrages; there are about fifteen of them, and it would be a very interesting task gathering them all together. There are *Saxifraga oppositifolia* (purple), *S. aizoides* (bright yellow), *S. hypnoides* (white) and various others, including our old friend, London Pride. The Sedums would make another collection, and here again one finds a great variety, from the common yellow Stonecrop, that grows on walls and cottage roofs, to the big purple Orpine (*Sedum Telephium*), which sometimes reaches a height of 2 feet. Pinks, of which there are four different kinds, also the Gentians, will adapt themselves to a rock garden quite happily.

A pond has great possibilities for wild gardening. To take one of the largest and handsomest plants first, we must be sure to include the Flowering Rush (*Butomus umbellatus*). It has long, sword-like leaves 3 feet or 4 feet long, and in the summer splendid heads of rose-coloured flowers. One should, of course, have Water Lilies, both yellow and white, also the yellow Iris for the early summer, with Arrow-head and Water Plantain to follow. If the edges of the pond are damp and marshy, then there are innumerable possibilities of growing things like Bog Asphodel (*Hottonia palustris*) or Water Violet, Butterwort, Buckbean, &c. Even if the edges are not marshy one can make a great show with Loosestrife, Forget-me-not, Amphibious Persicaria, Skull-cap and various other plants. In fact, as soon as one turns to wild gardening, a vast range of new and interesting possibilities is opened up to us.

One word of warning in conclusion. Unless the plants are common, or you know that there are plenty of them to be had, do not go and dig them up yourself, but get them from a florist. Almost all the rarer British wild flowers can be obtained quite easily and cheaply, either plants or seeds, from a good nurseryman, and, there is no excuse for despoiling the country of rare plants. D. C.

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NOTES OF THE WEEK.

The Great Spearwort.—What a noble waterside flower the native *Ranunculus Lingua* is, yet so very rare in English gardens. Its tall, straight stems, bearing very large, rich yellow flowers like giant field Buttercups, are very handsome. With this and similar moisture-loving plants more freely used we might obtain a fringe of beauty, not only of flowers, but also of foliage, to our pools and streams during the summer and autumn months.

The Shrubby Flax.—*Linum arboreum* is one among many others of a beautiful and useful class of plants. It is of a sub-shrubby character and well suited for the rock garden, usually attaining a height of 1 foot and as much through, although occasionally one comes across specimens twice that size. At the present time it is crowned with its golden cup-shaped blossoms. It is not in any way fastidious, but the best position for it is a sunny, well-drained one in gritty loam; and, should the soil be of a non-calcareous nature, it will greatly benefit by the addition of some old mortar rubbish worked in. The plant is easily raised from cuttings of the growth that follows after blooming.

The Speaker and Horticulture.—We have much pleasure in publishing a portrait of the Right Hon. James W. Lowther, P.C., LL.D., D.C.L., M.P., Speaker of the House of Commons, who is presiding at the annual Festival Dinner of the Gardeners' Royal Benevolent Institution on Friday of this week. This Institution is doing a vast amount of good work in granting pensions to aged or infirm gardeners, or the widows of gardeners. We hope that all of our readers will do what they can to support it. The secretary is Mr. G. J. Ingram, 92, Victoria Street, Westminster. In spite of his busy life the Speaker manages to find time to take a keen interest in practically all branches of horticulture, and may often be seen admiring the flowers at the Royal Horticultural Society's fortnightly shows. We hope at a later date to publish an illustrated description of the gardens surrounding his charming country residence, Campsea Ashe, Suffolk.

Rock Gardens at York Gala.—Rock gardens naturally form one of the great features of this exhibition, and the grand old stone of the Yorkshire moors is here used to great advantage. It is remarkable, however, that there is no special class for rock gardens at York. Class 2, which, according to schedule, is for a group of hardy plants and flowers, with a pool of water arranged for effect on the ground-

level, always brings a number of rock garden exhibitors into competition, although there is no mention of either rocks or alpine plants in the schedule. Surely it is time that the society altered its schedule to include a special class for rock gardens, and it is doubtful if any place in the British Isles is better situated than York for a really first-rate competition in this interesting phase of gardening.



THE RIGHT HON. JAMES W. LOWTHER, P.C., M.P., SPEAKER OF THE HOUSE OF COMMONS, WHO IS PRESIDING AT THE FESTIVAL DINNER OF THE GARDENERS' ROYAL BENEVOLENT INSTITUTION THIS WEEK.

The Misuse of Colour Terms.—There seems to be a growing tendency for raisers of new plants to include in their names some colour term that one might reasonably expect describes the colour of the flower. In two Roses of comparatively recent introduction the word "gold" appears, and purchasers naturally assume that they are buying Roses of golden yellow colour. But they have to get up early in the morning to see it,

because when the flowers have been kissed by the sun, the gold, elusive as the real thing, has departed. Then last week a good new Pæony with the prefix "golden" received an award of merit from the Royal Horticultural Society, yet its predominant colour is a charming shade of rose pink, what little yellow is present being almost hidden deep down among the numerous petals. This loose use of terms is misleading, and is certain to do raisers of new plants harm in the long run.

The Chelsea Flower Show for 1915.

On another page we publish a communication from the Rev. W. Wilks relating to the Royal Horticultural Society's Chelsea Show for next year. It will be seen that exhibitors have been asked to state whether they are in favour of the show being extended over more than the usual three days, or whether they would like the show to be opened on Wednesday instead of Tuesday. Considering the voting, the Council have decided to hold the show on three days only, and that these days shall be Tuesday, Wednesday and Thursday, as in the past. We think the Council have taken a wise step in coming to this decision. A flower show, especially where cut blooms are extensively used, is not particularly attractive after three days of warm weather, and we cannot think, considering all the circumstances, that more convenient days than Tuesday, Wednesday and Thursday could be chosen.

Fabiana imbricata.—This is one of the most interesting of plants, and, although it belongs to the same family as the Potato, so closely resembles a Heath from its outward appearance that, by the casual observer, it would at once be taken for a representative of that genus. It is a fairly quick-growing shrub, with upright habit, crowded with small leaves, the flowers being pure white and tubular in shape, and borne in great profusion. Like many other plants from the regions of Chili, it is only moderately hardy in some parts of this country, although in some favourable

districts it will make a handsome shrub, while in others it will often form an ornamental feature if given the protection of a wall. It is said to be a useful plant for growing in maritime districts where the climate is favourable, as few plants can stand the sea spray better than this. It is easily increased by cuttings, and, being a fast-growing plant, young ones soon replace an old plant, should any winter prove too hard for it.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

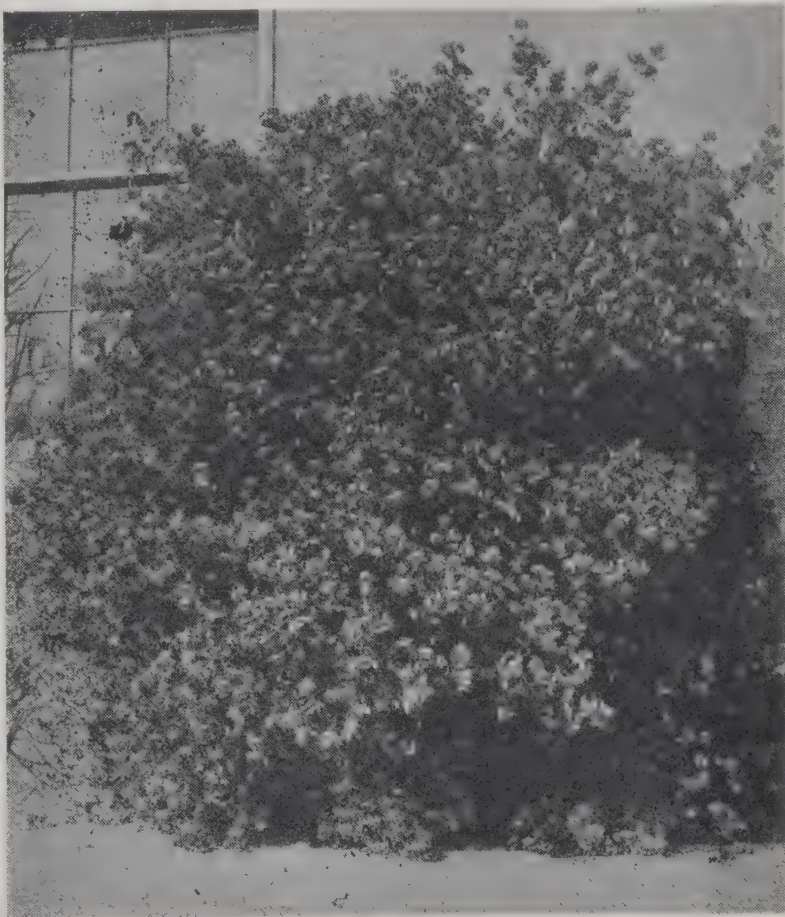
Coronilla glauca Outdoors.—The specimen shown in the accompanying illustration is planted on the south front of Theberton Hall, on the East Coast and not far from the sea. It has been flowering ever since last November. It is well worth a place in the garden for winter flowering. The plant is 6½ feet high and 6 feet wide.—W. H. COLLETT, *The Gardens, Theberton Hall, Leiston, Suffolk.*

Mazus reptans.—This handsome little plant has been grown in this country now for some years under the name of *Lobelia radicans*, and it was not until last year, when it was shown by the Wargrave Hardy Plant Farm at a meeting of the Royal Horticultural Society and given an award under the name of *Mazus rugosus* (which, by the way, is a weedy annual by comparison), that any interest was shown in it. It is a free-growing, pleasing little plant, blooming continuously from spring to late autumn, although perhaps not so freely as some plants. It prefers a cool spot in a sheltered nook, when its prostrate stems will creep about freely and the small green leaves form quite a dense carpet, above which are borne the purplish flowers, with yellowish white throats and reddish orange dots. In general appearance they very much resemble some of the small *Lobelias*. It is easily increased, as the young creeping growths root as they go, or they may be taken and placed under a handlight.—F. G. PRESTON, *Botanic Garden, Cambridge.*

Fecundity of Plants.—Having to hoe a border of the wild garden recently, I was struck by the remarkable fecundity of certain plants and the facility with which their seeds germinate, even under the most unpromising conditions. The Foxgloves, the Forget-me-nots and the Iceland Poppies are the examples I have in mind, where in each case young plants come up year after year in such remarkable numbers as to give the impression that the plants are perennials of most spreading habit. The seeds of many plants are exceedingly numerous. For example, the Henbane is calculated to produce from 30,000 to 50,000 seeds. The Poppy is almost equally prolific, and hundreds of others in this country or in their native home seed with such freedom as to make one wonder what would happen if every seed germinated. Here is an interesting theoretical calculation: One grain of Oats sown in an ordinary field will grow and branch, many of the branches producing a head of grain. For the calculation let us take modest estimates, say, eight branches each bearing thirty grains, so that the resulting crop is 8×30 times the amount sown. To argue that the crop should mean a return of 240 times the amount sown is pure nonsense; but where is the enormous loss, and cannot science do something to reduce that loss just as it is at present trying to attain satisfactory intensive cultivation?—H. H. A.

Roses on Their Own Roots.—It is quite a debatable point whether or not it is worth the time and trouble spent in striking cuttings of Roses to

raise a stock of plants to grow on their own roots. Years ago I struck many cuttings of Hybrid Perpetual varieties under glass and in the open. Some were a success, such as *Magna Charta* especially. Plants of this variety are still flourishing. La France, too, succeeded very well for a brief period, and so did Paul Neyron and John Hopper, as well as *Marquise de Castellane*. Many of the dark-coloured sorts like *Duke of Edinburgh* were too weak in growth to succeed; they seemed to require the aid of a wild Briar to make them grow well. I have tried of late many cuttings of climbing varieties, and find they succeed much better; but even these are not to be depended upon always. Many other sorts might be cited in support of my doubtful views as to the desirability of depending upon plants from cuttings. I think perhaps, if the plants so raised were tested in rows for one or two seasons before finally placing them in their permanent quarters, some disappoint-



A GOOD SPECIMEN OF CORONILLA GLAUCA GROWING OUTDOORS AT THEBERTON HALL, SUFFOLK.

ment might be saved. I recently saw in a nursery fifty plants of the variety *American Pillar* that had been so tested, and certainly the result well justified the trial. Such strong-growing sorts as *Félicité Perpétue* I know will flourish on their own roots equally well with the budded plants, but this variety perhaps stands alone in its vigour.—E. M.

Rehmannias for the Open Border.—*Rehmannia angulata*, and especially the variety *Pink Beauty*, is deservedly popular as a conservatory plant; but, excepting my own experience with it, I have only once come across it in the open border. That was at Hopetoun House, Linlithgowshire, when those gardens were under the charge of Mr. Thomas Hay, now Superintendent of Greenwich Park. So successful was Mr. Hay's experiment with it that I determined to follow his example, and the results have been equally satisfactory. Seed should be sown about midsummer in a pan in a greenhouse temperature, and when the seedlings are fit to handle they should be pricked out into

other pans or well-drained boxes, and in course of time potted up into 3¼-inch pots. If well attended to as regards watering, they may remain in these pots till planting-out-time, although it will be a great advantage if they can have a shift into 5-inch pots in the spring. The plants should be twice pinched to induce a bushy habit. Cool conditions suit them best, and they should be gradually hardened off so that they may be planted out in May. A few clumps of three in a herbaceous border help to give it a look of distinction. I am not quite sure where this species hails from, but botanists tell us that the genus is confined to China and Japan, and the other two introduced species, *A. chinensis* (syn. *glutinosa*) and *A. rupestris*, hail from North and Western China respectively.—CHARLES COMFORT.

Lifting Tulips.—In a letter to the Editor "H. B." asks my advice about lifting Tulips in a garden where the soil is heavy, and also in one where it is light. I think there is no doubt whatever that Tulips do better when they are lifted and replanted every year, whatever the soil is. As the bulb loses the whole of its roots, or, to speak more correctly, as the new bulb makes no roots for a considerable time after the roots of the old one have perished, nothing is gained by their being left undisturbed, except perhaps an earlier start into life, which is just the one thing most of us do not want to facilitate. The foliage comes through the ground quite soon enough in our trying climate when the bulbs are planted in November. "H. B." also enquires about the treatment of Tulips when they are lifted. As soon as the stems and leaves have gone quite withered-looking and dry, take up the bulbs, cut the dead foliage off, and spread out thinly in boxes or on a floor out of the reach of the sun and draughts, but with plenty of air. When they have become dry, clean the bulbs and store them in a dry place in paper bags until planting-time. The smaller bulbils should be put by themselves in a nursery bed to grow on, and be planted in September. The very small ones had better be thrown away, except those of any very special sort.—JOSEPH JACOB.

An Iris Contrast.—It is somewhat remarkable that the beautiful Chinese Iris *Delavayi* is not more generally grown in gardens. This, however, may be due to the fact that its beauty has yet to be seen by many garden-lovers. There is nothing quite so rich in the violet hue among Irises as *Delavayi*, unless it is one or two of the finest of the *Kämpferi* Irises. In any case *Delavayi* is a plant to grow. It is a true moisture-lover, tall and graceful, and with just a touch of white on the petals to relieve the intensity of the violet. We use *Delavayi* for bedding with speciosum Lilies, and as such it is quite a success. Its finest effect, however, is against a mass of *I. aurea* or *I. Monnieri*, where the intense hue of *I. Delavayi* is admirably heightened and contrasted by the golden colouring of *I. aurea*, *I. Monnieri* or any similar Iris. All these Irises are of fairly easy growth, and do best in a loamy soil enriched with farmyard manure, and neither should be omitted from any representative collection.—P. S. HAYWARD.

A Use for Bishop's Weed.—Mr. Brotherston is to be much congratulated on having found one use for this, as mentioned on page 303, issue June 13. I never thought it had any use. I always like to know and have asked many people why it was so called. No one could tell me; but one gentleman, after pondering the matter for a while, said, "It might be the difficulty of getting rid of it."—T. SMITH.

Primula Leddy Pilrig.—I am much obliged to Mr. Robertson (page 302, June 13) for his information regarding the parentage of his hybrid Primula Leddy Pilrig. The note will be exceedingly useful to hybridisers of these valued and valuable flowers, and it is quite evident that Mr. Robertson is absolutely correct in his knowledge of the parentage of his Primula. The opinion I expressed was that of several authorities of experience in hybridising and raising seedlings of these Chinese Primulas, but that goes for nothing in view of the courteous statement of Mr. Robertson. P. Leddy Pilrig is quite a pleasing plant, which many who saw it would doubtless be glad to possess.—S. ARNOTT.

Too-much-alike Auriculas.—Your correspondent is quite right regarding the carelessness of exhibitors who in some instances acquire new varieties and without consulting the raiser exhibit and rename them. He refers to the alpine variety Unexpected, and rightly says, or infers, that Exquisite is the same. It is a fact that it was exhibited first as Unexpected; but that old enthusiast, Mr. Joseph Stokes of Harborne, was the raiser of it, and he it was who sent it out as Exquisite. I believe it was the result of crossing two good varieties, Dean Hole and Enteric (the latter, although anything but a cheering name, was a lovely bloom), one of the many good ones introduced many years ago by that veteran Auricula specialist, the late Mr. Pohlmann of Halifax, who died before growers had learned to appreciate his beautiful achievements among alpine varieties, although both gentlemen made their mark in the stage varieties also.—W. P.

Hardy Primulas in Scotland.—Knowing that Mrs. de Pree of Saughton House, Corstorphine, Midlothian, was specialising in Primulas, I visited her garden towards the end of May expecting a treat; nor was I disappointed. This garden is a veritable *multum in parvo*, where rosary, wall garden, moraine, rockwork and herbaceous borders are all included and all well done; but it is of the Primulas I wish to write, and especially of P. pulverulenta, P. Veitchii and P. cockburniana. These are all grown by the score in colonies and in different situations, some in partial shade and some in full sunshine, but all in the pink of health and blooming most profusely. I found that in the case of P. Veitchii the depth of colour varies considerably, and by means of selection Mrs. de Pree and her gardener, Mr. Hunt, hope to raise an improved strain of this beautiful Primula. With regard to P. pulverulenta, it proves more vigorous in full sunshine than in partial shade, but the flowers suffer somewhat from the sun's rays. The flower-stems of this fine Primula averaged 22 inches in length. P. Forrestii, which is being appraised at a high value, I was not much enamoured of. Here at least it thrives best in a shady part of the wall garden. P. Sieboldii in variety and P. cashmeriana are also grown in quantity here, and others grown are P. beesiana, P. capitata, P. marginata, P. frondosa, P. rosea, P. sibirica, P. Kellereri, P. involucrata, P. hirsuta, P. The General, P. Julæ, P. Auricula

Double Red and P. A. Double Yellow.—CHARLES COMFORT.

Lopezia miniata.—Though this distinct and pretty flowering shrub is better known in the West of England than in other parts, it is well worth attention as an ornamental subject for the greenhouse, where with attention it will flower during the spring and well on into the summer months. It is a near relative of the Fuchsia, but in general appearance differs markedly therefrom. This Lopezia forms a freely branched little shrub, clothed with ovate leaves about an inch long and plentifully furnished with hairs. The flowers, which are produced from the axils of the leaves on the upper parts of the shoots, are bright rosy red in colour and of a very peculiar shape. When fully expanded they are not more than half an inch across, but are borne in great profusion. A singular feature of the flower is the two-stalked petals, which stand out on either side in a strange wing-like fashion. This Lopezia is a native of Mexico, and may be given much the same treatment as a Fuchsia, except that, the wood being thinner, the plant should not be subjected to a pronounced drought during the winter, while at that season the temperature should not fall below 40°. The leaves are very liable to be attacked by red spider, so that the plants should be freely syringed during the summer.—H. P.

Aids to Vegetable Growth.—During the month of June there are no more important details in vegetable culture than those of watering, mulching and syringing of the various crops, yet among amateurs these points are so little understood, and therefore their value is not appreciated to the extent they should be. So many persons say, "If I begin to water my crops, I must continue; therefore I had better not commence." This is a great mistake; one good soaking may save many crops if proper steps are taken to conserve the moisture in the soil afterwards. What is known as the dribbling system of watering is certainly not to be recommended, as this does more harm than good, because it encourages the roots near the surface, and if moisture is not maintained, the plants suffer in consequence. Give sufficient water to thoroughly wet all the roots, and the plants will show their appreciation by stimulated growth. After watering, conserve the moisture in the soil by applying a mulch of manure of a half-decayed nature, some 3 inches thick. If manure is not available, decayed vegetable refuse, lawn mowings or old potting soil will suffice. Failing even this, the next best thing is to keep the soil stirred near the plants by the aid of the Dutch hoe or small fork. Syringing such plants as Peas, Beans and Turnips in the evening after a hot day does much good, keeping the foliage cool during the night and aiding growth considerably, and very often preventing an attack of thrip to Peas or red spider to Turnips.—E. MOLYNEUX.

FORTHCOMING EVENTS.

June 30.—Royal Horticultural Society's Summer Show, Holland House, Kensington (three days)

July 1.—Flower Shows at Colchester, Reigate and Southampton.

July 2.—Norwich Summer Show. Streatham Rose Show.

July 3.—Dundee Horticultural Association Meeting.

July 4.—Société Française d'Horticulture de Londres Meeting. Sutton (Surrey) Rose Show. Northwood Rose Show.

ROSE SPECIES AS GARDEN PLANTS.

THE employment of Rose species in our gardens has undoubtedly increased of late years, but is well worth further consideration on the part of those who have room for them. No doubt to those who regard their beds and borders merely as nurseries for the production of flowers to be staged at exhibitions they will make but little appeal, for their beauty is at its height through May and early June, and their flowers are, for the most part, over long before the time for Rose shows arrives. For a similar reason, those who see little of their gardens till July or August will, perhaps, not set much store by them. Again, their period of flowering is generally very short, not often exceeding a fortnight of full flowering in any individual case. Moreover, as cut flowers they cannot compete in usefulness with many of the modern decorative varieties of Roses, except, perhaps, on the very few occasions when a plant can be caught at its very best. But let us recognise their limitations and treat them rather as flowering shrubs, and not in any way as substitutes for garden Roses, and we shall find many of them of great interest.

In relation to the Rose garden proper, their position should be rather on the outskirts than within the precincts. Here some may be trained into beautiful little hedges of varying heights, according to the species employed; or, where space is available, a large bed or border may be formed for a collection, or smaller beds of one or two or three kinds; while there are some which will form fine isolated specimens on lawns or in grass, and in such positions are beautiful all the summer for their foliage. There are many of the species that can be used with effect in the rockery or in its neighbourhood; but it is not of these that I am particularly thinking to-day. These Rose species are also suitable for forming little groups in the front of an open shrubbery border containing other flowering shrubs; but I do not think they mix well with ordinary herbaceous subjects, except, perhaps, with Lilies and hardy Fuchsias.

Perhaps I ought to state that I am using the expression "Rose species" (for want of a better) in a somewhat inaccurate sense, without any botanical significance, to include not only botanical species, but many forms and varieties of similar habit. Many of those I shall name are undoubtedly hybrids, and some, perhaps, of garden origin; and though it may be that most of them have, at some time or another, been described as species, it is a rank to which they certainly could not all be admitted nowadays.

I will begin with the great Scotch Rose group and its allies, which include some of the earliest and most beautiful. R. pimpinellifolia itself, though very charming and, if planted on poor soil, producing its delightful single creamy white flowers only a few inches above the ground, is too small for our purpose; but the pink and blush double Scotch Roses make a first-rate low hedge, and the form Lindley called grandiflora, now known as

Rosa altaica, is alike one of the hardiest and most beautiful. It forms a compact little bush about four feet high, producing large white flowers, occasionally attaining a size of 5 inches across. When procured upon its own roots and doing well, it forms numerous root shoots or suckers from the

base, and this and its habit of growth make it particularly suitable for forming a low hedge 3 feet to 4 feet high. When used in this way, it is sufficient to tie the growths, some time during the winter, slantwise to one another, and the hedge soon forms. An occasional flower is produced in autumn as a pleasant surprise. The berries are a deep purplish black and not very conspicuous. *R. altaica* also looks well in a little group of six to twelve plants, or may be associated with *R. hispida* and *R. xanthina*, which have a somewhat similar habit of growth.

R. Alberti has flowers of a good clear yellow colour, which are very pleasing. It is rather more arching and spreading than the last Rose, and decidedly more tender, requiring, as it seems to me, richer soil and more careful cultivation.

R. hispida has a very charming flower of clear primrose yellow, nearly, if not quite, as large as *R. altaica*. The habit of the plant is of similar

flowers are of a paler yellow colour. It seems hardy enough, and makes a good bush.

R. rubella is a pretty little plant, and one very common in botanic gardens. It has soft pink flowers and small but pretty leaflets, and possesses the peculiarity among members of this group of having red berries. It is of hybrid origin.

R. spinosissima lutea is a Rose growing slightly taller than *R. altaica*, but of much the same habit, except that it is not quite so well furnished with foliage to the base of the plant. It has, however, the finest coloured yellow flowers of the group, as deep as Persian Yellow, which always attract attention. Professor Crépín thought this a hybrid.

R. xanthina, the last of this group I shall mention, is, perhaps, one of the most satisfactory, and there are few things more effective during the short time they are in perfection than a group of plants of this Rose in full flower. The flowers are

A big-growing hybrid of this species, *R. stenosepala*, is interesting for the quantities of red berries it produces in autumn.

R. macrophylla, from the gardener's point of view, may be regarded as an alpina with the characters exaggerated. The long leaves, with the large, loose leaflets of alpina, are here longer and larger and more highly coloured, especially in autumn, while the urn-shaped berries are longer and more fantastical. Its foliage and fruit are its chief merits as a garden plant; but the very long, twisted sepals are curious, and give a character to the large single pink flowers. To be seen at its best, the plant requires more careful treatment than *R. alpina*. There is, however, a variety, *R. oxyodon hæmatodes*, which I imagine to be a hybrid of this Rose, that is of easier culture. In connection with this group I should mention

R. Moyesii, a very beautiful and interesting plant growing to a height of 8 feet or so. The flowers are a wonderful terra-cotta pink and very beautiful, and the foliage is of a beautiful glaucous hue. It seems quite easy to grow, but by no means so easy to get to flower profusely. I have recently moved my plant, which had attained considerable proportions, to the foot of a south wall under the protection of a Cherry tree, and it is only just recovering from the disturbance. Though I incline to think sun and some slight protection are the conditions it requires, I do not yet feel in a position to write confidently about it. A quaint little plant,

R. microphylla, of low stature and with beautiful Fern-like foliage, is one of the curiosities among Roses. It bears berries resembling those of the Spanish Chestnut.

R. sericea is one of the finest of Rose species, and best as an isolated bush, when it will attain a considerable size—8 feet or 9 feet high, and even more in diameter through the bush. There are probably several forms which have not yet been distinguished by names. Some have red berries, and others, which I prefer, orange berries. The flowers are white, with four petals, and produced in early May,

and the foliage is most graceful and Fern-like. Long, straight shoots are produced from the base and centre of the plant, the older ones gradually arching downwards to clothe the base. Leave it alone when doing well.

R. sericea pteracantha, remarkable for its enormous thorns, red and translucent on the young wood, requires very different treatment. Here the maximum production of young wood is wanted, so it should be cut down immediately after flowering. Two other Roses I must refer to. One,

R. rubrifolia, is becoming well known for its lovely foliage. Bear in mind that it is a plant of the high alpine valleys. The other is

R. Andersoni, a hybrid of the *systylæ* group, but approaching the habit of *canina*. This Rose is remarkable for the abundance, brilliancy and beauty of its pink flowers, which will often vie with the garden Roses themselves.

H. R. DARLINGTON.



THE FORMAL SUNK GARDEN AT BLECHLEY PARK.

rather upright, yet fairly bushy growth, and the foliage characteristic of the Scotch Rose family; but it possesses the peculiarity of having very numerous setæ, or fine needle-like prickles, but no thorns.

R. Hugonis is the earliest of this group, but alas! one of the most tender. I have had a bush of it 4 feet and 5 feet high, with its arching stems covered all their length with its beautiful yellow blossoms about the size of half-a-crown. But never has it lasted like this for long. Time and again a spring frost, coming just as the flower-buds were bursting, has killed all the upper branches, leaving only the lower and more protected ones to carry on the life of the plant and help it to throw up its pretty young basal shoots and re-form the plant for another year.

R. ochroleuca is another yellow-flowering Rose, probably of hybrid origin, bearing some resemblance to *R. xanthina* in its stems and prickles, but the

of a fine yellow colour, not so clear and deep as *spinosissima lutea*, but more freely produced and somewhat larger. *R. xanthina*, though a near connection of the Scotch Rose family, has the peculiarity of possessing sharp, well-developed thorns, but no setæ. It is of quite easy culture and hardy. On the other hand, the dwarfier *R. Ecæ*, from Afghanistan, which is possibly a form of the same Rose altered by habitat, is very difficult to get to flower in this country. Of

R. alpina, the Thornless Rose, one of the parents of the Boursaults, there are three forms at least worth growing as flowering shrubs for the spring garden. *R. alpina* itself looks very well when the blood red flowers first open, and is curious afterwards for its urn-shaped berries. It is best as an isolated plant, growing 4 feet to 5 feet high. *R. alpina pendulina* has even more beautiful foliage and more graceful habit, while the variety *pyrenaica* has a few prickles and is much dwarfier,

ROSE-GROWING IN TOWN GARDENS.

THERE has been something of an outburst recently against scentless Roses, and there are those who tell us that to lose the scent is to destroy the soul of our national flower. Let such folks revel in their Hybrid Perpetuals! A sweet-smelling Rose is a joy to everyone, and I have no wish to belittle the importance of scent, but I regard it as of much less merit than shapeliness. Surely there is greater reason for pleasure in the perception of beautiful and artistic symmetry of form than in the mere tickling of the olfactory nerves, and certainly a "feast for the eyes" appeals more to the poetic sense than a "feast for the nose." The one is an intellectual pleasure, the other merely a sensual enjoyment.

There can be no single standard of shape; there are so many, each equally beautiful when brought to perfection. For there lies the secret. Almost every Rose will produce a shapely bloom if there is sufficient vigour in the growth to enable it to do so. To the unsympathetic a Rose bloom is just good or bad; to the lover of the flower it is a source of joy or otherwise, as it has been well or badly used.

This is borne in upon us particularly at the present moment, when our early blooms are suffering to some extent from checks which have delayed them too long in the bud. In many cases frost has crippled the foliage as well, and the early summer has proved anything but an ideal one so far. But the English summer that proved entirely suitable for Roses has yet to come, and one must be prepared to lose the results of a number of the early growths.

It is extremely difficult to guard against spring frosts, and the mischief they do among the more tender plants is soon apparent. The only precaution one can take is to see that the foliage is kept as dry as possible when there is any likelihood of a cold night, and spraying the plants at such a time should be carefully avoided. A check in the early stages of development is a misfortune from which numbers of the buds are unable to recover, for there is little doubt that the split centres from which many of the flowers suffer are due to this cause. The tendency is, of course, inherent in some Roses, and one would not expect a J. B. Clark without a division somewhere. Others that are chiefly affected are those with many rows of petals, and are usually vigorous kinds. It would seem as if the delay in development was confined to the sepals, while the petals, in endeavouring to expand without increased room, were forced out of their natural position.

P. L. GODDARD.

GARDENS OF TO-DAY. BLETCHLEY PARK, BUCKINGHAMSHIRE.

OUR first acquaintance with Bletchley Park, the Buckinghamshire seat of Sir Herbert and Lady Leon, was made a few years ago when visiting the flower show held annually in those delightful and extensive grounds. The parkland is beautifully situated and well wooded, while magnificent views may be obtained of the surrounding country through open vistas and avenues in the higher parts of the estate. Our last visit was made a few weeks ago, when Lilacs and Laburnums,



PHLOX NEWRY SEEDLING IN THE FOREGROUND AND DOUBLE ARABIS AMONG THE UPPER ROCKS IN SIR HERBERT LEON'S GARDEN.

against a background of dark green conifers, converted the carriage drives and garden walks into avenues of unusual splendour with purple, white, and golden-coloured flowers. The mauve-tinted Persian Lilac and the white Charles X. were most effective. The gorgeous effect produced by planting Lilacs and Laburnums in this way leads one to enquire the reason why these common but beautiful trees are so often relegated to obscure corners of the garden and pleasure grounds, instead of being given—as at Bletchley Park—the prominence they most certainly deserve. Trees and shrubs, not unnaturally, form one of the charms of these gardens in leafy Buck., and glorious effects have been created with foliage trees, in which Copper Beeches, Golden Maples

and *Prunus Pissardii* play an important part. A promising young tree of *Sophora japonica* occupies a prominent place on a spacious lawn near the south front of the house. The tree, raised from a seed brought by Lady Leon from Washington in March, 1897, is now of spreading habit and about twenty feet in height, but so far it has not flowered. Shrubby *Spiræas* are much in evidence; *S. prunifolia*, *S. van Houttei* and *S. Douglasii* being used with good effect.

Rock and Water Garden.—An extensive rock garden has been made to take the place of a steep bank at the head of a lake. Although of recent construction, the rock garden is already splendidly furnished with large patches of alpine flowers. These are effectively planted, and the bright masses of mountain flowers are reflected in the placid waters beneath. Saxifrages and *Androsaces* both do well on this rocky bank. *Saxifraga* Red Admiral flowers with great freedom, and even the rarer *S. Faldonside* and *S. burseriana* give quite a good account of themselves. *Violas*, *Ericas* and *Lithospermums* are other subjects that look particularly happy in their congenial surroundings.

A small Water Lily pool in an enclosed garden, surrounded by a paved walk and a wealth of alpine flowers suitably planted among rocks, makes a most pleasing feature. The illustration of the stone steps leading to the pool gives an idea of the quiet beauty of this secluded garden. The design is simple, happily conceived, and carried out in good taste. Between the paving-stones low-growing plants like the Thyme, Thrift, wall Campanula and Kenilworth Ivy spread naturally, while the rocky banks are clothed with alpine *Violas*, *Saxifraga decipiens*, *Heucheras*, *Alyssum*, double *Arabis*, *Aubrietia* Dr. Mules, *Phlox subulata*, *Corydalis lutea* and *Arenaria balearica* (the Creeping Sandwort). Another rock garden links up the lawn with the shrubbery. In this case rambling Roses over rustic poles, together with a great variety of ornamental foliage and flowering trees, make a fitting background to the rock garden. *Cotoneasters* and Rock Roses are planted here to advantage, while *Phlox Newry* Seedling, double

Arabis, followed by *Campanulas* and *Dianthus*es in variety, grow freely and flower in profusion over huge rocky boulders.

Bedding designs are carried out on an extensive scale, and the illustration on page 328 shows a sunk garden of formal outline, in which the beds are filled with Wallflower Cloth of Gold, *Myosotis alpestris* and white *Violas*. Of Tulips for spring bedding, the varieties *La Merveille*, *Clara Butt*, *Glow*, *Bouton d'Or* and *Farncombe Sanders* are the most favoured.

In addition to the beautiful pleasure grounds and flower garden, the kitchen garden, fruit-houses and plant-houses all reflect the highest credit upon Mr. G. Cooper, the genial and able head-gardener.

REGAL PELARGONIUMS.

THE term "Regal" is applied to a section of large-flowered Pelargoniums nearly related to the show and decorative classes. As Nature draws no hard-and-fast line, these groups merge into one another by almost imperceptible gradations, so that it is in some cases impossible to say to which section they belong.

In the first half of the seventies of the last century, the first of the Regal Pelargoniums made its appearance in the variety Queen Victoria. This, with its thick, crisped petals, which presented the appearance of a semi-double flower, in colour vermillion, margined with white, was quite a break away from any then known, and there was a very large demand for it—so large, indeed, that great numbers were sold at a guinea a plant. Other varieties, such as Beauty of Oxton, Captain Raikes and Dr. Masters, soon made their appearance, till the list of Regal Pelargoniums became quite a long one. Owing, however, to the popularity of this section, others that would be more properly classed as decorative were often included therewith. A few of the best of the Regal varieties would include Beauty of Oxton, Beatrice Hume, Captain Raikes, Dr. Masters, Emmanuel Liais, Lady Duff, Duke of Fife, Bush Hill Beauty, Princess Teck, Champion, Miss Lily Cannell, Volonté Nationale, Gloire de Tours, Prince Teck and Prince of Wales.

Cultural Requirements.—This class of Pelargoniums need the same treatment as the nearly allied kinds; that is to say, they are readily increased by cuttings, and are grown on in good loamy soil in a light and airy greenhouse. By varying the treatment as to temperature and potting, they may be had in bloom from May till the end of the summer. The best time to take the cuttings is directly the flowering period is past, the plants being cut down to within a few inches of the soil. Prior to cutting them down, the roots should be kept rather dry for a few days. From these cut-off portions of the plants the most suitable cuttings should be chosen, selecting for the purpose the short, sturdy shoots that are likely to develop into good bushy plants. All weak shoots with a tendency to flower must be avoided. About three inches or a little more is a suitable length for the cuttings, which must be inserted into clean, well-drained pots of sandy soil. The compost may be made up of loam lightened by a little leaf-mould and sand, the whole being passed through a sieve with a one-third of an inch mesh. As much of the soil as possible should be rubbed through. When the pots are filled, they should be duly labelled and watered through a fine rose, after which they may be stood on a light, airy shelf in the greenhouse or in a similar position. If inserted in July, the cuttings will be well rooted

within a month, when they will be fit for potting off. For this purpose 3-inch pots are very suitable, and the same kind of compost as before recommended for the cuttings may be used, but it should not be sifted. In a good, light position in the greenhouse the young plants will grow away freely, so that the most forward may be shifted into 5-inch pots by the autumn. They must, when young, have the growing points pinched out, in order to ensure a bushy habit of growth. Some varieties will require more frequent pinching than others. As the plants go out of flower, cuttings may be put in up to the end of August or even later; but, of course, these will take

the best way of keeping the plants free of this pest.

Old Plants.—When the old flowering plants are cut down as before mentioned, they should be stood on a stage in the greenhouse fully exposed to the sun. They will not require any water at the roots, but should be bedewed over two or three times a day with the syringe. Under this treatment young shoots will soon be pushed out, and as soon as the most forward are about half an inch in length, the plants should be repotted. They must be shaken quite clear of the old soil, when, at least in some cases, it will probably be found that there are but three or four roots coiled around the pot. These roots should be cut back hard, and all the plants be repotted into a much smaller pot than they were in before. Some will by autumn need repotting, but the bulk may be left till the spring. At all events, these old plants may, if desired, be grown into much larger specimens than those obtained the first year from cuttings. H. P.



ROCK GARDEN BY THE LAKESIDE AT BLETCHLEY PARK.

longer to root than the earlier ones, and consequently they are best wintered in small pots. In early spring they may be put into those in which they are to flower, 5-inch and 6-inch being very suitable, using turfy loam with a little leaf-mould or well-decayed manure and sand, and taking care that the soil is pressed down firmly. This last item is a very important one in the culture of these Pelargoniums, as, if potted loosely, the shoots run up quickly and become bare at the base before the flowering period. When the pots are well furnished with roots, stimulants must be given; but it should be borne in mind that cuttings from highly fed plants do not root so readily as those to which little stimulant has been given. In all stages of growth green fly gives a good deal of trouble, requiring being

that flower earlier. Turning to other bulbous plants, we find the early flowering Gladioli particularly useful in such varieties as Colvillei alba, The Bride (pure white) and cardinalis (scarlet, with white flakes). Blushing Bride is a pleasing combination of white and pink, while Peach Blossom and Rosy Gem are titles that need no comment. Following on these are the Spanish Irises, which for cutting can scarcely be equalled. Some pretty colours include Cananus (deep golden yellow), Reconnaissance (dark bronze with gold blotch), King of the Blues (a fine dark blue), British Queen (white, striped orange) and Louise (pale blue). The English Irises flower a few days later, and some good examples are Proserpine (dark purple), Mont Blanc (white, with yellow band down the centre) and Prince Imperial (clear blue).

HARDY FLOWERS FOR CUTTING.

THAT hardy flowers are more popular to-day than ever goes without saying, but those that are adapted for indoor decoration are, perhaps, the most useful. To be able to cut them with the freedom that one ought, it is advisable to have a reserve plot for the purpose, as cutting from the permanent borders is seldom satisfactory, for fear of spoiling the effect. Such a plot should be situated in a good growing position and be well cultivated, and planted more for ease in cutting rather than for effect.

The earliest flowers available are the Narcissi; but as these are usually planted under more natural conditions, they are not a necessity in this plot, unless it be the late Gardenia-flowered variety, *N. albus plenus odoratus*, which appears to delight in rather better attention than do those

After these come the beautiful white spikes of *Hyacinthus (Galtonia) candicans*; these are very useful for tall vases along with the late summer-flowering *Gladioli*. This section is larger and more stately than the early-flowered varieties, and they are seen at their best in such forms as *blechnensis* (brilliant scarlet) and the many charming hybrids.

Among the Lilies we have a wide choice, and as many of them are happier when not disturbed too frequently, the site for them should be thoroughly prepared previous to planting. In the speciosum group we have such sterling varieties as *s. Melpomene*, with rich crimson flowers, heavily spotted and edged white; *s. album*, pure white; and *s. rubrum*, white, with red spots. Other most useful forms include *L. candidum* or the Madonna Lily, also the beautiful Orange Lily (*L. croceum*), while *L. tigrinum* (Tiger Lily) and the charming *L. canadense* are indispensable. Of *Montbretias* it is impossible to speak too highly, as they are so light and graceful, and in colours that are very effective under artificial light. They have also been considerably improved of late years, a fact which is very noticeable in such varieties as *Prometheus*, with its tall branching spikes of rich orange flowers that are shaded and spotted with crimson in the centre. Others of equal merit are *George Davison* (pale orange), *Koh-i-noor* (deep yellow on apricot base) and *Germania* (orange scarlet). The foregoing notes, though not exhausting the suitable list of bulbous plants, serve to show that from June till well into October there is more or less of a succession, and the same is possible to a greater extent among plants at very little cost, as many of them can be raised from seed sown in early summer.

Commencing with this convenient section, one of the most useful is the *Aquilegia*, as few hardy flowers come in earlier and are more effective in vases of any description. These are followed by the *Pyrethrums*, which for their beauty and free-flowering nature are well worthy of extensive cultivation. From a packet of seed some good varieties are obtainable; but where this method of obtaining a collection is not adopted, the following is a selection of the best forms. Among the doubles are *Lord Rosebery* (scarlet), *Aphrodite* (white), *Duchess of Teck* (pink) and *Lady Kildare* (buff yellow). Some pleasing singles are *Ixon* (bright rose), *James Kelway* (crimson), *Ahmed* (pure white) and *Fairfax* (pink). For July flowering the brilliant colours of the *Gaillardia* and of *Coreopsis grandiflora* are indispensable.

In *Heuchera sanguinea* we have a typical herbaceous plant, and as its flowers are most useful for cutting, it should not be overlooked. *Delphiniums* are beautiful in their varying shades of colour. Among the named varieties they are seen to perfection. *Belladonna* is a lovely blue with white eye; *Euchantress*, light blue. In *Barlowii* the flowers are deep blue, shaded red, while for a pale yellow there is none to compare with *Beauty*

of Langport; it is a semi-double, and its well-formed spikes are freely produced. Another charming flower is *Scabiosa caucasica*. In colour it is pale lilac, and as the flowers are formed on exceptionally long stems, it cannot be too highly praised. A vase of Sweet Peas is incomplete without that charming little flower, *Gypsophila paniculata*.

The Giant Oriental Poppies are not favourites with everyone; but as they are practically alone where size and rich colouring are concerned, they are worthy of a little space. Of a more graceful appearance are the Iceland Poppies, and though, like others of the same family, they are short-lived, vases containing them more than repay for the trouble of everyday replenishing. *Lychnis chalcedonica* is also worthy of note for its brilliant heads of scarlet flowers. The Ox-eye Daisy (*Chrysanthemum maximum*) is useful, as are some of the Campanulas, notably *C. grandis*, *C. pyra-*

and fragrance nothing can equal *Hesperis alba flore pleno*. Other varieties are *H. lilacina* and *H. purpurea*. All of them are at their best towards the end of June.

The Phloxes are general favourites, especially in such an excellent variety as *Amabilis* (bright salmon with crimson centre). *Iris* is a beautiful shade of violet blue; *Amazon* is pure white; a beautiful rose pink is *Eclairer*; while for an excellent scarlet *John Stewart* is worthy of note. *Achillea Ptarmica* The Pearl is at its best in July, as are also *Helenium pumilum magnificum* and the newer variety *Riverton Gem*. With the approach of September there is a wide choice of suitable flowers. The outdoor *Chrysanthemums* are approaching their best, the perennial *Sunflowers* give us an abundance of yellow flowers, and the Japanese *Anemones* supply the always big demand for white flowers, while the brilliant spikes of *Kniphofia*



STONE STEPS LEADING TO THE WATER LILY POOL AT BLETCHLEY PARK.

midalis and *C. persicifolia*. All the above repay for good treatment to fit them for early spring planting. There are others not generally raised from seed that should on no account be overlooked, as they include some of the brightest and most reliable flowers for all purposes. Of these the earliest to flower are the *Doronicums*, two useful varieties being *D. austriacum* and *D. plantagineum excelsum*. Both bear yellow flowers on long, slender stems, but the last named is of a more robust habit, growing some two feet higher than the former. *Dielytra spectabilis* and *D. s. alba* bloom at a time when outdoor flowers are none too plentiful, and as their graceful racemes of pink and white are much sought after for tall vases, they are worthy of good treatment. *Anthemis tinctoria* (rich yellow) and *A. pallida* (creamy yellow) are both useful plants, as their period of flowering usually extends over a few weeks. *Inula glandulosa* is another yellow flowered plant not to be missed; but for purity

Uvaria are readily made room for. These are not over before the Michaelmas Daisies come in cloud-like clusters to last until the cold nights prove too much for them. Of these, *Beauty of Colwall*, *Climax* and *Amellus Perfect Beauty* are indispensable.

F. J. TOWNEND.

HERBACEOUS BORDERS.

In addition to staking and tying, the flowering stems of such plants as *Lupines*, *Doronicums* and many other early flowering subjects should be cut over as soon as they begin to fade. In the case of *Lupines* and *Delphiniums*, they usually throw up a second crop of flowers in the autumn, which are most acceptable. Should any vacant spaces appear in the border as the result of this cutting, these could be filled up with suitable annuals or other plants that may be at hand.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Silene alpestris grandiflora flore pleno.—This charming alpine is so fully described by its name that little need be said of it beyond the fact that it is calculated to become one of the most popular of rock garden subjects. It is 6 inches or so high, the double, pure white flowers about half an inch across, and produced with the same abundance and profusion as in the typical species. Quite an acquisition to first-class alpine and a gem withal. The purity of its shroud of blossoms is reflected by a carpet of shining green leaves. It is quite the best new alpine of the year. Exhibited by Messrs. R. Tucker and Sons, Oxford, and by Mr. G. Reuthe, Keston, Kent.

Delphinium Henri Moissan.—The flowers are large, semi-double, reddish violet or purplish in colour, and framed into a handsome spike. From Messrs. Blackmore and Langdon, Bath.

Sweet Pea Robert Sydenham.—A very beautiful waved variety of deep orange salmon colour. The best of its class we have ever seen. The blooms are large and well placed on the stems. From Mr. Thomas Stevenson, Addlestone.

Sweet Pea Royal Purple.—The name is not quite colour descriptive, but as an approximation there-to readers will get a good idea of a very fine and distinct variety.

Sweet Pea Dobbie's Orange.—A most brilliant flower, and a variety of merit and distinction. The individual flowers are very large. These came from Messrs. Dobbie and Co., Edinburgh.

Carnation Scarlet Glow.—A very handsome and shapely border variety of brilliant scarlet hue, the petals of very firm texture. We regard this as one of the best scarlets yet raised. From Mr. C. Blick, Carnation specialist, Hayes, Kent.

Rose J. F. Barry.—Said to be a sport from Arthur R. Goodwin. In any case it is a charming variety, rich golden yellow in the centre and white tipped on the outer petals. It is obviously a free and profuse flowering variety, and promises well as a garden Rose. Shown by Mr. G. W. Piper, Uckfield.

Rose Princess Mary.—A single-flowered crimson of considerable colour richness. Indeed, in this respect it is one of the most brilliant we have seen. From Mr. Elisha Hicks, Twyford.

Carnation Bedford Belle.—A Perpetual-flowering variety of delicious fragrance and that shade of salmon pink which engenders popularity. The flower is of medium size, shapely, and in its class probably unique for its rich Clove perfume. Raised and exhibited by Messrs. Laxton Brothers, Bedford.

Pæonia Golden Harvest.—This is a double pink-flowered sort, and we take the name as suggestive of the money an acre or so of such a beautiful variety would bring to the commercial grower. From Messrs. Bath, Wisbech.

Polystichum minutum undulatum.—Those who know the typical species will realise the importance of the new-comer as indicated by the varietal name. It is very beautiful and distinct. From Mr. J. Fraser, Uchelet, British Columbia.

All the foregoing were shown before the floral committee of the Royal Horticultural Society on the 16th inst., when the awards were made.

A USEFUL FLOWERING CURRANT.

(RIBES GORDONIANUM.)

THIS Flowering Currant is not so frequently met with as the commoner *R. sanguineum* and its varieties, and is not so showy or free-flowering, yet it is a valuable shrub for the mixed border.



THE NEW DOUBLE-FLOWED PÆONIA GOLDEN HARVEST.

It is of garden origin, a hybrid between two well-known species, viz., *R. sanguineum* and *R. aureum*, the well-known and commonly called Buffalo or Missouri Currant. It forms a dense, spreading bush, and the flowers are a very pleasing and unique colour, a shade of terra-cotta red, and are darkest on the outside, thus making the racemes, which are fairly long, very conspicuous before the individual blooms open. In foliage the parentage is entirely distinct, *R. sanguineum* having tomentose foliage, while *R. aureum* has decidedly glabrous, pale green leaves, and the hybrid is intermediate, resembling *R. aureum* in the shape of the leaf. For vase decoration it is a good shrub, as the sprigs last well in water, are showy and distinct. E. BECKETT.

Aldenham House Gardens, Elstree.

DAFFODILS IN NEW ZEALAND.

THE notes on "Daffodils in New Zealand," which appeared in *THE GARDEN* last September, were intended to interest your English readers in the progress New Zealand is making with the Narcissus, and also with the object of eliciting comment and information on the subject from other growers, for I am sure that among them there must be a large fund of interesting experience and knowledge, which each individual grower would like to share. It seems a round about way of obtaining such information, by means of an English paper, but we have not in New Zealand a gardening periodical, or any newspaper taking a lively interest in horticultural matters, with anything like a general circulation through the Dominion. However, *THE GARDEN* is a very popular medium, and by availing ourselves of it we effect the double purpose of reaching home and Colonial readers at the same time.

I have just read the letter of Mr. Frank Mason of Feilding in your issue of February 21 last commenting on my notes, and am very pleased he has let me down so lightly with regard to my ignorance of Wellington growers, which I admit, but do not wholly regret, since it brought forth his letter, and I hope will be but one of many such. Since I penned my notes my knowledge of Southern doings has expanded, for I have made the acquaintance of Mr. A. E. Lowe of Tai Tapu, Christchurch, who came to Auckland to act as judge at our show last September, and Mr. Joseph Weightman of Awahuri, whom I met at the Cambridge Show the same month. The latter staged there some of his early flowering seedlings, and I can fully endorse Mr. Mason's opinion of his tridymus varieties. I secured some of them to bring to Auckland for our Daffodil Conference, but unfortunately they did not last long enough. The early trumpet seedlings shown, which he told me were mostly the result of his initial sowings of seed from chance crosses, were, I thought, lacking in finish and refinement; but I was much struck by the robust strength they all showed, demonstrating that the soil and climate of Awahuri are eminently suitable for Daffodils.

In conclusion, may I reiterate the wish that other New Zealand growers, especially those South of Auckland, will take advantage of your columns to let us know how the culture of our spring favourite progresses from here to Invercargill? I understand we are to have an article on this subject in the next issue of "The Daffodil Year Book," but that will not be published for some months to come, and I prefer the homeopathic principle of "a little and often."

Auckland, New Zealand. F. E. GRINDROD.

GARDENING FOR BEGINNERS.

FLOWERS IN OLD BARRELS.

THE accompanying illustration shows an old barrel planted with suitable subjects and forming a picturesque addition to my garden. A rough wooden pipe was made 3 inches across and square-sided, and the length was nine-tenths of the height of the barrel, and stood upright in the centre after being pierced with holes. This was to ensure water reaching all parts, and in dry weather it must be often filled up. Soil was filled in between the pipe and the sides, with crocks and a few turves in the lower third. The plants were inserted as the soil reached the level of the holes cut in the sides of the barrel.

Saxifraga umbrosa (London Pride), *Cerastium tomentosum* (Snow in Summer), and a hardy *Geranium* grew and flourished exceedingly. The *Saxifraga* can be seen in full bloom now, and the *Cerastium* just shows round the edge on the right. A *Campanula* and some Wallflowers (on the top) sprang up of their own accord; the latter were the finest in the garden. I have just cut off the bloom, hoping they will flower again later. The *Campanula* is not yet due to show buds. On the top I have also seedlings of Canary Creeper, which will run up three sticks slanted over the watering pipe in gipsy tripod fashion, and a *Campanula garganica* is thriving, its roots being protected by large stones. These are necessary, as otherwise the soil at the top gets very dry in sunny weather.

On the ground round the base I had Forget-me-nots and Wallflowers. I cleared them away just before the photographer came, so as to make the picture less confused; but they are essential to complete the beauty of the real thing. Three large, healthy bosses of *Sedum grandiflorum rubrum* (red Stonecrop) can be noticed, which will come into bloom later and last till November; so three seasons' flowers are ensured. The *Cerastium* and *Saxifraga* were green and pretty all the winter.

Finchley, London, N. M. W. S.



AN OLD BARREL PLANTED WITH HARDY FLOWERS IN A LONDON GARDEN.

RAISING PLANTS FROM SEEDS AND CUTTINGS IN FRAMES.

WE are persuaded that the raising of plants from seeds and cuttings claims the serious attention of so many of our readers that we gladly comply with the requests we have received to deal with the subject. So far as the raising of annuals and other plants intended for use in the present summer bedding is concerned, the moment is late. At the same time, the amateur's frame is so constantly in request that hints on management of both the frame and its occupants are serviceable at any season. In the first place, we must differentiate between the cold frame and the manure frame or hot-bed, since both have their separate uses, and should not be confounded the one with the other.

The Cold Frame.—During the spring months, more particularly of April and May, the cold frame

is especially valuable for the hardening off of bedding plants, *Lobelia*, *Ageratum*, *Heliotrope*, Ivy-leaved and Zonal *Pelargoniums*, and other such plants rooted and potted in the previous autumn which have had their winter quarters in the greenhouse. In early autumn the same frame would be in request for cuttings of *Violas*, *Calceolarias* and *Pentstemons*, while possibly also affording shelter to *Echeveria*, which is much used as an edging plant. For such cuttings it is important that the bed of soil be raised fairly high, say, to within 8 inches of the glass. This will promote and retain dwarfness in the young plant, and that degree of sturdiness, too, so essential to subsequent success. The raised cutting-bed will also afford drainage, and, in conjunction with intelligent ventilation, keep damp at bay.

such a frame is in every way excellent for starting tuberous *Begonias* or *Dahlias* from which cuttings may be required. Tomato, Cucumber or Vegetable Marrow seeds may also be sown. By securing two or three loads of stable manure—a scarcer commodity in these days than formerly—turning it over occasionally to dispel rankness, moistening any dry parts meanwhile, it will be ready for making up in a fortnight or so. It should be made 18 inches wider than the frame at all points, and, when completed, a 2-inch surface covering of Cocoanut fibre or sifted leaf-mould should be given inside the frame. In a day or two the frame will be available for use. Cuttings will need careful watering and shading. A watchful eye must be kept so that an excess of steam does not collect. This with strong sunlight is dangerous. Cuttings of the before-named subjects require free supplies of water and root quickly. *Phloxes*, *Chrysanthemums* and *Pentstemons* should be early removed after rooting, or they will become drawn and weak.

Raising Seedlings.—The chief dangers to these in such a frame are thick sowing, over-watering, too much soil covering, and delay in pricking off. The first and last militate against success by producing a thin, lanky growth, and plants of the annual class, *Schizanthus*, *Clarkia*, *Delphinium* and others, rarely recover if once they become drawn. Here the amateur or beginner should remember that a dozen nicely grown *Schizanthuses* are better than fifty lean specimens. The former are the more readily produced by sowing three or four seeds in a 4-inch pot, subsequently reducing the seedlings to one plant, and removing its point of growth when 2 inches or so high. This allows of the whole space of the pot and the soil, too, for a single plant. Subsequent stopping will promote bushiness, and an early shift into a 6-inch pot will do the rest. Earlier sowings of this plant in a cold frame will give good results for bedding, observing drier treatment generally. The *Schizanthus* does not usually transplant well; hence pot-raised plants as suggested are the best.

The Frame.—But while thick sowing and the other things named are sources of danger and great drawbacks to success,

there is an almost equal danger in the frame itself. The frame should be clean, well painted or white-washed. The covering lights should also be scrupulously clean. Light is an important factor to good growth, and may be unduly withheld owing to dirty glass or small squares of glass. The use of small pieces of glass is wrong and bad, and should not be countenanced. Each in its way obscures light, and a thin, meagre growth results. Then, the surroundings of the frame are often at fault, trees or buildings obscuring the light so much needed by the plants. These are some of the things to avoid, some of the things which cheat the beginner out of the successes which should be his, if one might judge of the assiduity and zeal with which he pursues his way.

Avoid frequent sprinklings of water overhead. One good watering when the cuttings are inserted should last for a fortnight. **The Manure-Bed Frame** has a greater value than the cold frame, in that in it may be raised all manner of half-hardy subjects from seeds. For example, *Aster*, *Stock*, *Phlox Drummondii*, Tobacco Plants, *Ageratum* and others may be raised in this way; while cuttings of *Lobelia*, *Heliotrope*, *Chrysanthemum*, *Verbena*, *Fuchsia*, herbaceous *Phlox* and similar plants will often root with greater certainty in such a frame than in the greenhouse. One reason of this is that they revel in the slightly ammonia-charged atmosphere, the uniform warmth and moisture arising from the manure-bed being also congenial to their well-being. Then, again

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Strawberries.—No time must be lost in securing sufficient young plants for next season's forcing. Layers should be carefully placed in small pots, which may be half plunged between the rows of plants. When these are sufficiently rooted, they may be removed to some convenient spot near the potting-shed until they are ready for potting into 6-inch pots.

Tomato Plants.—Pits from which bedding plants have been removed may now be planted with strong Tomato plants, in preference to planting in the open garden. If confined to single stems, they may set a few trusses of fruit by the middle of August, when the lights can be replaced in order to ripen the crop before the season is too far advanced.

Plants Under Glass.

Tree Carnations.—Plants which were struck in February will now be ready for potting into 6-inch pots. Later plants which are intended for flowering in the winter should be grown in a well-ventilated pit, and, if necessary, the tops may be pinched as late as the end of July. Pot firmly in good turfy loam and leaf-soil, with a sprinkling of fine bone-meal, and in well-crooked pots. Syringe lightly until fresh roots are made. When the plants become established, they may be placed on a bed of ashes in a cold pit, from which the lights can be removed during fine weather and replaced during heavy rain.

Begonia Gloire de Lorraine.—The most forward batch of plants should be neatly staked before the shoots become bent. If large plants are desired, a number of thin Bamboo tips may be placed in each pot as soon as the final potting is accomplished, and the young shoots secured as time advances. When the pots are well filled with roots, frequent applications of liquid nourishment will be necessary. Later plants, if placed in small pans or baskets, will make a good display if suspended from the roof of a warm house during the winter.

Rhododendrons and Azaleas which have finished their growth and set their buds should be placed outdoors in a position which is not exposed to the midday sun. The pots may be partly plunged in a bed of ashes. Soot-water may be frequently applied, and the plants freely syringed with clear soft water during dry weather.

Cyclamen.—Young plants in 3-inch pots may be potted into 5-inch pots as soon as they are ready. The compost should consist of rich loam and leaf-soil, with a good sprinkling of rough silver sand. Place them in a cold frame on a good bed of ashes, and keep a sharp look-out for thrip, which is a troublesome pest among these plants. Light shading must be provided during sunny weather.

The Flower Garden.

Border Carnations.—These are now pushing up their flowers, and should be carefully staked before they become too far advanced. Keep the hoe at work between the plants, and give light dustings of soot during showery weather. When the flowering period is over, preparation should be made for layering young stock for next season's blooming, and these should be planted in their flowering quarters by the end of September.

Pinks.—Now is the time to propagate Pinks. If cuttings are inserted in a cold pit and shaded from strong sun, they will soon make roots, when the glass should be removed, in order to keep them hardy and short-jointed until they are planted in the autumn.

Anchusa italica.—The flower-stems of this beautiful plant should be secured to strong Bamboo sticks with as little delay as possible. The wind and rain may soon destroy them if not secured beforehand. Anchusas are easily propagated by cuttings of the roots, which may be prepared in the same way as Seakale cuttings. August is the most convenient time for the purpose.

The Rock Garden.

Spring-Flowering Subjects.—Many of these are over, and should now be trimmed to give them a tidy appearance and prepare them for the

production of cuttings for next season's stock. For instance, the choice varieties of Aubrietia, if cut over now, will soon produce cuttings, which are easily propagated in a cold frame later in the season. The same remarks apply to Arabis.

Saxifrages.—Remove old flower-spikes and thin out and top-dress the plants as soon as possible. By these means young stock will be available for future plantations.

Plants in Exposed Positions should be carefully watered during dry weather, and this must be applied through a fine rose to prevent washing the soil from the roots of the plants.

The Kitchen Garden.

Planting Autumn Broccoli.—There should be no delay in planting early Broccoli. The ground for this crop can hardly be too rich, as the plants will not be subjected to any severe weather before the crop is cut. In planting late Broccoli, the situation chosen should be open and the soil not too rich, or many of the plants may die during the winter. All winter greens ought to be planted as soon as the land becomes vacant, and it should be remembered that nothing is gained by overcrowding.

Celery.—Continue to plant this crop until the required number of plants has been put out. Water freely as soon as the plants are placed in position, and never allow the beds to become too dry during the growing season.

Leeks.—The maincrop Leeks should be planted as soon as possible. The ground ought to be well enriched with farmyard manure, and the plants allowed 12 inches each way. Water freely as soon as the plants are put out.

Onions.—Spring-sown Onions should be thinned as soon as possible. Three inches apart will be sufficient for ordinary purposes; but if extra large bulbs are desired, a little more room will be necessary.

Chicory.—As soon as the plants are large enough they should be thinned to 9 inches apart. Keep the hoe at work and give light dustings of soot during the growing season.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Carrots.—There will still be time to make another sowing outside to provide some useful roots for the late autumn; indeed, in many cases this will be a necessity where earlier sowings have only done moderately well. For this late sowing it would be as well to select the Scarlet Model or Stump-rooted sorts. This sowing could be made on ground from which early Potatoes have been taken, and all that will be required to be done is simply to rake the ground over and apply a dressing of soot or wood-ashes. Should the weather be dry, it would be as well to water the rows until the plants are well above the soil.

Scarlet Runner Beans.—As these will now be growing nicely, see that they are supported in the first instance with small stakes, which will serve until they take hold of the larger ones. Should the soil be of a light nature, mulch them on each side of the row with mown grass or manure, for, as I have already pointed out, it is of the utmost importance that they do not suffer from lack of moisture at the roots, otherwise they will most assuredly fail to set the flowers.

Onions.—Where good-sized bulbs are required, the thinning out of the young plants should be completed at once. After this thinning they must be encouraged by frequent applications of manure-water, or sulphate of ammonia and sulphate of potash in equal parts.

Early Potatoes.—As the border on which this early crop was planted will be required for seed-sowing or other equally important crop, the remaining Potatoes should be lifted and stored. While doing so, select tubers for seed for next season's crop. These had better remain outside exposed to the weather for a time until they become perfectly ripened. In selecting the seed, see that each set is true to the type of the particular variety.

General Remarks.—Keep up a supply of salads by making frequent sowings of Lettuces

and Mustard and Cress. Sow the former sparingly, as it is better to simply thin them out. Every encouragement should be given to growing crops by keeping down weeds and the removal of decayed matter, and giving an occasional dressing of some approved artificial manure.

The Flower Garden.

Azaleas.—These will now for the most part have passed out of flower, and, where at all possible, the seed-vessels should be picked off and some of the stronger shoots reduced, especially among the better varieties. The plants must never be allowed to become dry at the roots, and, should there be the slightest suspicion of this, give them a good soaking of water. Afterwards apply a heavy mulch of farmyard manure, which should be allowed to remain during the season.

Brooms.—Like the foregoing, the various varieties will also have passed out of flower; but, unlike Azaleas, pruning may be more freely indulged in. There is no plant that seems to get so soon out of hand as the Broom, more particularly the lovely white variety, and, strange to say, it is just this sort that most people are afraid to prune. For some years I have cut the plants back just after they have flowered, with the best results; but this work should only be done by an experienced person.

Double Rockets (Hesperis).—These fine old-fashioned plants, which have been supplying us with such sweet-scented spikes for decoration for some weeks past, should now be cut well down to the ground; this applies more particularly to the double white and purple. They will then form fine bushy plants, which may be broken up in the autumn and replanted. I find that unless they are treated in this way, they quickly go back, and if they are not in very favoured districts they soon die out.

Begonias.—These are plants that require abundant moisture at the roots, and although the soil has been well manured, they will be all the better to have a mulching over the surface during the earlier stages of growth. There are many things that might be used for this purpose, such as leaf-mould and mowings from the lawn; but possibly peat moss litter will be found to be as good as any. If this is passed through an ordinary riddle or sieve and spread carefully over the surface, it will not be in the least unsightly.

Plants Under Glass.

Primulas and Cinerarias.—It will not be too late to make a small sowing of these useful early summer-flowering subjects to ensure a succession to those sown earlier in the year. At this season they will do better under somewhat cooler treatment, and if carefully attended to will make quite good plants before the autumn.

Humea elegans.—This elegant greenhouse plant will now be developing its inflorescence, and the utmost care must be exercised in watering. Perhaps there are no plants that resent carelessness in this respect more so than Humeas, and that in all stages of their growth. Young plants from a spring sowing will be ready for a shift into a larger pot, but on no account overpot them.

Fruits Under Glass.

Melons.—The various crops will now be in all stages of growth, and plants that are swelling their fruit should have the laterals stopped and be given abundant supplies of water at the roots. Endeavour to keep the foliage clear of red spider and mealy bug by the vigorous use of the syringe. Plants growing in frames should have the growths so regulated as to prevent the atmosphere from becoming stagnant. Unless in very favoured districts, it will not be wise to make any further sowings after this date, as during the latter half of September and the beginning of October it is difficult to keep Melons growing with any degree of success.

Figs.—The first crop will now have been secured, and the trees should be gone over and examined for insect pests. If any are found, the trees should be syringed with some approved insecticide. The second crop is usually a very abundant one, and will be required to be severely thinned to enable the trees to ripen the fruit. Give plenty of water to the roots, and if the trees are not over-vigorous, give some liquid manure occasionally.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Office: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

CARNATIONS NOT DOING WELL (Mrs. C.).—The Carnation blooms you sent were cut from weak, sappy stock; this can be easily judged by the flabby stems. Secondly, they are all suffering from the ravages of red spider. These two reasons are the cause of small blooms and poor plants. The pest is one that requires to be absolutely destroyed; all plants so affected must be burned. The buff suffused rose pink bloom is called Robert Morton; it is a border Carnation, but owing to its weak neck and weaker habit it is not what we would describe as a useful variety.

CULTIVATION OF GERBERAS (Mrs. S.).—In order to induce a good display of bloom, Gerberas need liberal treatment during the growing season. If in pots, a suitable compost may be formed of three parts of yellow loam and one part each of leaf-mould and well-decayed manure, with a fair sprinkling of silver sand. The pots must be effectually drained, as the plants need to be freely watered except during the winter months. While the above instructions apply to Gerberas when grown in pots, the plants succeed far better when planted out of doors in a warm sheltered spot. A good example of this is in front of the Orchid-houses at Kew, where some grand specimens are to be seen; towards the end of the summer and in early autumn these throw up a mass of flowers such as one never sees when they are restricted to pots. It must, however, be borne in mind that only under very favourable conditions will the Gerbera survive the winter when planted out, and it is most questionable whether it will do so in your district. When in pots, an occasional stimulant during the summer, either in the shape of manure-water or one of the many concentrated plant foods now so generally used, will assist in the production of blossoms.

BOTANICAL TOOLS AND GENTIANAS (Tim).—Try Messrs. Sutton and Sons, Reading, or Messrs. Barr and Sons, King Street, Covent Garden, for the former. The Gentian family is of so comprehensive a nature, so varied in stature and its requirements, that in a brief reply it would not be possible to refer to the many species in detail. At some future time we may be able to refer to them more fully. Some of the more fastidious species are responding to moraine treatment, and it is not improbable that for such as *alpina*, *imbricata*, *l. alba*, *bavaria* and others this will prove a more or less congenial home. For the exquisite *G. verna* some useful suggestions have been given in recent issues of THE GARDEN, and usually the plant is a success in very sandy soils or sandy peat with summer moisture. *G. acaulis*, still one of the most precious of the race, usually grows and flowers well in light sandy soils over gravel, in Heath-like soils, and in loamy soils over sandstone rock or limestone. For these carpeting and stoloniferous sorts firm planting is essential. The Willow Gentian (*G. acaulis*) is usually happy in cool woodland places; and *G. septemfida* and *G. Przewalskii*, both free flowering and beautiful, are content in cool places in very sandy loam and peat. *G. Andrewii* (the Closed Gentian) prefers moisture or very cool loam

and peat soils. We doubt your obtaining great success when growing these plants in pots, and only the more diminutive-growing species would be at all suited to the treatment. Given the soils mentioned, any so grown should be plunged in a cool spot in the open or in a bed encompassed by a perforated pipe, so that a cool base would always be assured them.

ROSE GARDEN.

ROSES AT BAGATELLE (H. V. B.).—The following are the awards given to various Roses from 1907 to 1913 by the Juries appointed to judge those sent to the Bagatelle Gardens by various raisers. Too much importance must not be attached to these awards, as several of our most successful raisers did not send their Roses for competition. 1907.—Gold medal: Marquise de Sinety. Classed Roses: Mme. E. Sablayrolles, Mme. Constant Souper, Souv. de P. Notting and Mrs. Peter Blair. 1908.—Gold medal: Rhea Reid. Bronze medals: Dorothy Page-Roberts, Mme. Second Weber, Mrs. Dudley Cross and Frau Oberhofgartner Singer. 1909.—Gold medals: Lyon Rose and Mme. Second Weber. 1910.—First-class certificate: Molly Sharman Crawford. Certificates: Mlle. Marie Mascrand, Lady Alice Stanley and Commander Jules Gravereaux. 1911.—Gold medals: Beauté de Lyon and Jonkheer J. L. Mock. First-class certificate: Viscountess Enfield. Certificates: May Miller, Walter Speed and Desire Bergera. 1912.—Non-competitive: Rayon d'Or, Sunburst and President Vignet. First-class certificate: Mme. Jules Bouché. Certificates: Frau Margrethe Moller and Orleans Rose. 1913.—Gold medals: Mme. Charles Lutaud and Mabel Drew. Non-competitive: Louise Catherine Breslau and Mme. Edmond Rostand. First-class certificate: Grange Colombe. Certificates: Mrs. Amy Hammond, Louise Lilia and Wichmoss.

FRUIT GARDEN.

PEAR LEAF MITE (Dr. W. E.).—The Pear foliage is badly attacked by the Pear leaf mite, *Eriophyes Pyri*. (See reply to "J. G." in our issue of May 23.)

INJURY TO CURRANTS (L. B.).—We suspect a beetle, a species of *Rhynchites*, is damaging your Currants, and think it would be well to spray the bushes immediately with lead arsenate.

SILVER-LEAF ON A PEACH TREE (F. J. S.).—The Peach is affected with silver-leaf disease, for which no cure is known. It is a fungous disease growing in the wood of the trees, and when once a tree is attacked, it rarely recovers. Your best plan, since so much of the tree is affected, will be to root it out and start afresh.

LEAF-BLISTER ON PEAR FOLIAGE (Mrs. K. A. K.).—The Pear foliage is attacked by the Pear leaf-blister mite, *Eriophyes Pyri*. We have recently given a short account of this pest in our "Answers to Correspondents," and recommend that when only a few leaves are attacked, they should be removed, but when many, the trees should be sprayed about the end of May with a nicotine wash, and in winter, while the trees are dormant, with lime-sulphur salt-soda wash, commonly called the Oregon wash.

LEAF-CURL IN PEACHES (W. J. H.).—The Peach and Nectarine leaves are attacked by the fungus *Exoascus deformans*, which produces the disease known as leaf-curl. It would be well to pick off all the affected shoots immediately and burn them, taking the precaution also of spraying the trees with ammoniacal copper carbonate at the same time. When once a shoot is attacked, it rarely recovers, and is of no use to the tree; it is rather a menace than otherwise. The disease is always most prevalent where cold winds have access to the tree, and on this account screening the trees from winds in early spring, and from frost, is very desirable.

MISCELLANEOUS.

VARIOUS QUESTIONS (White Horse).—Frost sometimes affects Asparagus in the way mentioned, but injury from any cause—insects, the cutting knife, &c.—might bring it about. The cause of the extremely common phenomenon known as fasciation is unknown, nor is any remedial measure known. It is usually attributed to excess of food, either local or general. The only means of keeping wasps out of a viney are: (1) Destroy all the nests in the neighbourhood. This may easily be done if the wasps' nests are traced and a small quantity of carbon bisulphide poured into them after dusk, taking care to dig out the comb next day. (2) By covering over the ventilators of the house with muslin or mosquito netting. It would be better to fumigate the *Clianthus* rather than to spray it with paraffin emulsion, and if spraying is regarded as the best method of attack, then a nicotine preparation would be safer to use than paraffin.

NAMES OF PLANTS.—Mrs. P. J., Chester.—*Saxifraga oppositifolia*.—Felpham.—*Muscari comosum plumosum*.—Subscriber.—Apparently *Sedum spurius*; cannot name without flowers.—Anne Amateur.—The flower was too far gone to recognise.—A. C.—*Lonicera involucrata*.—F. N., Woolwich.—*Heracleum villosum*, also called *H. giganteum*, a Caucasian plant belonging to the Umbellifer family.—H. J., Ozon.—1, *Sedum rupestre*; 2, *Spiraea bracteata*; 3, *Armeria maritima lauchiana*; 4, *Lithospermum purpureo-ceruleum*; 5, *Saxifraga tenella*; 6 and 7, *Helianthemum vulgare* varieties.—H. G.—1, *Lycostera formosa*; 2, *Thuja plicata*; 3, *T. orientalis*; 4, *Collomia coccinea*; 5, *Kleinia articulata* (Candle Plant).—F. E. W.—1, *Lithum pyrenaleum*; 2, *Dianthus cæsius* variety; 3, *D. deltoides*; 4, *Acœna Novæ-Zelandiæ*; 5, *Saxifraga Sibthorpii*.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THE fortnightly meeting of the Royal Horticultural Society was held at Vincent Square, Westminster, on June 16. Hardy perennial flowers were shown in profusion, and the excellent exhibits of fruit trees in pots were deserving of the highest praise.

FRUIT AND VEGETABLE COMMITTEE.

Present: C. G. A. Nix, Esq. (chairman), and Messrs. W. Bates, E. Beckett, H. Markham, A. R. Allan, F. Perkins, W. E. Humphreys, H. J. Wright, P. C. M. Veitch, A. Bullock, J. Jaques, J. Willard, W. Pope, A. Grubb and A. W. Metcalfe.

Vegetables were not extensively shown, but Messrs. Barr and Sons, Covent Garden, W.C., sent a collection that came in for a good deal of praise. In addition to Peas, Carrots, Cucumbers and Cauliflowers, there were Mushrooms, Egg Plants, and such herbs as Pennyroyal, Silver Thyme, Rosemary, Witloof and Myrrh. A silver-gilt Knightian medal was awarded to this collection.

Messrs. G. Bunyard and Co., Maidstone, showed Cherries in pots, all well cropped with their luscious fruits. The varieties shown were Elton Heart, Black Heart, Governor Wood, Werder's Early Black, Ludwig's Bigarreau, Black Tartarian, Turkey Heart, Frogmore Bigarreau, Napoleon Bigarreau, Waterloo and Belle of Orleans. The collection was interesting, and reflected great credit upon the cultivation given them. Silver Banksian medal.

The gold medal collection of pot-trained Peaches, Nectarines and Cherries shown by Messrs. James Veitch and Sons, Chelsea, was beyond question one of the features of the exhibition. Among the fan-trained Peaches, Amsden June was shown in grand form. This is one of the best of the early Peaches, being just in front of Duke of York, and ripens at the same time as Early Alexander. Of the Cherries, Frogmore Bigarreau is one of the best of the White Heart varieties. It was interesting to note that Guigne d'Annonay, the oldest Cherry in cultivation, is still one of the earliest to ripen, and an excellent cropper.

A silver Banksian medal was awarded to the Horticultural College, Swanley, Kent, for packed fruits.

ORCHID COMMITTEE.

Present: Sir Harry J. Veitch (chairman), Sir Jeremiah Colman, Bart., and Messrs. James O'Brien, Gurney Wilson, R. A. Rolfe, F. Sander, J. Wilson Potter, S. H. Low, F. J. Hanbury, R. G. Thwaites, T. Armstrong, A. McBean, W. Cobb, J. Charlesworth, C. H. Curtis, W. P. Bound, A. Dye, E. H. Davidson, H. G. Alexander, W. H. White, S. W. Flory and W. Bolton.

There were very few novelties on this occasion, the only one to gain an award being *Odontoglossum King Arthur*, shown by Messrs. J. and A. McBean, Cooksbridge, for which a first-class certificate was awarded.

Silver Flora medals for groups of Orchids were granted to His Grace the Duke of Marlborough, Blenheim, Woodstock, Oxon; Messrs. Stuart Low and Co., Bush Hill Park; and Mr. E. R. Ashton, Broadlands, Tunbridge Wells.

A silver Banksian medal was awarded to Messrs. Charlesworth and Co., Hayward's Heath, for a group of choice Orchids including many *Odontiodas*.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. C. T. Drucery, W. A. Bilney, J. W. Barr, F. W. Harvey, J. Hudson, R. Hooper Pearson, C. R. Fielder, J. F. McLeod, C. Blick, J. Jennings, W. Howe, G. Reuthe, C. Dixon, H. J. Jones, F. Page-Roberts, C. E. Shea, C. E. Pearson, G. Paul, W. J. Bean, J. T. Bennett-Poë, W. P. Thomson, E. H. Jenkins, W. G. Baker, W. Cuthbertson, A. Turner and J. W. Moorman.

Messrs. R. W. Wallace and Co., Colchester, displayed a goodly table of hardy plants, among which were noted *Iris gracilipes*, several pots of which were most profusely flowered; *Hypericum reptans*, a graceful trailing species with yellow flowers and reddish stems; *Iris Forrestii*, yellow, with blackish striated falls; *Pentstemon heterophyllus*, of metallic blue and violet shades; with *Campanula garganica* in blue, white and pale blue, *C. pulla*, *C. pulloides*, together with fine batches of *Verbascums*, *Ixias*, *Primula bulleyana*, *Heucheras* and other good hardy flowers.

Messrs. Barr and Sons, Covent Garden and Taplow, Bucks, had an excellent display of *Pæonies*, Spanish *Irises* in variety, *Lupines*, *Delphiniums*, the early flowering *Gladioli*, *Nepeta Mussinii* and choice *Lilies*, of which *L. regale* (*myriophyllum*) was perhaps the most pronounced.

Mr. James Box, Lindfield Nurseries, Hayward's Heath, Sussex, arranged an excellent corner group of hardy plants, among which were *Pæonies* in variety, Double White Rockets, *Delphiniums* in variety and Spanish *Irises* galore, Walter T. Ware (yellow), *Chrysolora* (golden), Snow Queen and Sweetheart (white and yellow) being among the best. *Pæonia lutea*, the yellow Tree *Pæony*, *Heucheras*, *Iris spuria*, *Wahlenbergia vincaeflora* and *Betonica grandiflora robusta* were other notable plants.

Messrs. Paul and Sons, The Old Nurseries, Cheshunt, had a beautiful table of Roses. Burning Bush (crimson), Mme. Second Weber, Lady Pirrie, Nalad (blush, with orange anthers, a new Hybrid Briar of huge size and informality), Lemon Pillar (new Noisette), Duchess of Wellington and Mme. Ravary were among the best in an excellent lot. Mme. Edouard Herriot was also charming.

Messrs. G. and A. Clark, Limited, Dover, displayed Poppies, *Pæonies*, Larkspurs, *Gallardias* and other hardy flowers.

Messrs. Thomson and Charman, Bushey, Herts, had excellent groups of Poppies, Pæonies, Geums, Lupines and other good hardy things. *Pæonia lutea splendens* is of a rich golden hue, with distinctly lobed leaves. Geum Mrs. Bradshaw (scarlet) and *Linum arboreum* (yellow) were also good.

Messrs. Stuart Low and Co., Enfield, showed some excellent vases of Carnations, Gorgeous, Princess Juliana, Baroness de Brien and Princess of Wales being excellent. Good Roses from this firm included Liberty, Rayon d'Or, Lady Hillingdon, Mrs. Charles E. Russell (deep rose pink of good form), Chateau de Clos Vougeot (deepest crimson) and Lady Pirrie, all being very charming.

Pæonies from Messrs. Kelway, Langport, were extraordinarily fine. Queen Alexandra (single white), Cendrillon (rose), Orby (crimson), Dorothy Kelway (rose) and Sir T. J. Lipton (crimson, with gold anthers) were very good. The Delphiniums from this firm were also excellent. Dusky Monarch (lovely mauve and blue) and James William Kelway (an improved King of Delphiniums) were among the best.

Mr. Amos Perry, Enfield, showed a great bank of Poppies, including Perry's Blush, Perry's White and The King (a glorious bit of colour). *Thalictrum aquilegifolium* compactum, *Abutilon vitifolium* album and Irises were very finely displayed.

Messrs. Bunyard, Maidstone, had a good display of Pæonies, of which Duchesse de Nemours (fine white) was one of the best.

Messrs. Blackmore and Langdon, Bath, showed some excellent Delphiniums. Henri Moissan (rich purple), Walter T. Ware (purple, white eye) and Mrs. A. J. Watson (deep mauve) were among the best. *Begonia semperflorens virginialis* was also fine.

Messrs. T. S. Ware, Limited, Feltham, showed Pæonies, Gaillardias, Peach-leaved Campanulas, Iris ochroleuca, Delphiniums and *Achillea alpina* in goodly numbers, the whole making a fine display.

Achillea King Alfred, said to be a cross between *A. tomentosa* and *A. Kellers*, is very free-flowering. It has primrose yellow flower-heads in abundance. It was shown by Mr. W. Miller.

Mr. Elisha Hicks, Twyford, had some good Roses, Mrs. G. Norwood (pink), Princess Mary (Hybrid Tea, single crimson, very fine) and Mrs. Charles Reed (blush) being notable flowers.

Messrs. F. Smith and Co., Woodbridge, filled a lengthy piece of tabling with Poppies, Lupines, Anchusas, Heucheras, Gaillardias, Delphiniums and other showy hardy flowers.

Messrs. James Veitch and Sons, Chelsea, had a fine grouping of *Elaeagnus reticulatus*, a beautiful white-flowered Australian evergreen shrub. The flowers are drooping, bell-shaped and minutely fringed.

Messrs. R. H. Bath, Wisbech, had a showy lot of Pæonies, *Solfaterra* (white and cream), *La Fiancée* (white), Marshal Oyama (pink, gold anthers) and Her Grace (full double pink) being excellent. Spanish Irises were very fine.

Messrs. Piper, Bayswater, displayed *Saxifraga* Cotyledon, *Wahlenbergia vincaeflora*, Mule Pinks, Iris Snow Queen, *Genista prostrata*, *Hypericum fragilis*, *Corydalis tomentosa*, *Acantholimon venustum* and *Dianthus Atkinsonii*, which were very beautiful.

Messrs. Laxton, Bedford, had some excellent vases of the fragrant pink-flowered *Carnation Bedford Belle*. It is a most charming flower.

Mr. G. W. Piper, Uckfield, Sussex, had a delightful lot of the new Rose J. F. Barry. It is one of the Pernetiana group, quite hardy, richly perfumed, golden, with white outer petals; a most charming and free-flowering variety.

Mr. Charles Blick, Hayes, Kent, displayed some excellent Carnations, Charles Blick (the pure white Malmaison), Salome (fancy), Scarlet Glow (very fine) and Cecilia (yellow) being very fine. Hylda Blick (rich deep cerise) was also fine.

Messrs. R. Tucker and Sons, Oxford, had some charming alpine on rockwork, *Saxifraga cochlearis* major, *S. caesia*, *S. tyrolensis*, *Wahlenbergia saxicola*, *W. vincaeflora*, *Onosma taurica*, *Primula littoniana*, *P. capitata*, *Campanula cenisia* alba, *C. pulla*, *C. excisa*, *C. raddeana* and *Silene alpestris grandiflora* flore pleno being some of the most charming in a fine lot.

Messrs. Wills and Segar, South Kensington, had a long table of white, blue and pink flowered Hydrangeas. They were very fine examples.

Mr. G. Reuthe, Keston, had a delightful lot of things, of which *Ozothamnus rosmarinifolius*, *Saxifraga tombeanensis*, *Silene alpestris grandiflora* flore pleno, *Saxifraga valdensis*, *Moltkia petraea* and *Geranium Traversii* (pink, with silvery foliage) were among the best. *Bruckenthalia spiculifolia* (pink trusses on Heath-like stems) was very charming.

The Lissadell Bulb Farm, Sligo, sent *Primulas beesiana*, *bulleyana*, and the hybrids *Alannah* and *Ashore* (*bulleyana* × *beesiana*), differing in the shades of red and orange.

Messrs. John Waterer, Sons and Crisp, Limited, Twyford, had some beautiful alpine. *Genista humifusa*, *Potentilla nitida* alba, *Lewisia Howellii* and *Trollius yunnanense* were excellent. *Lewisia rediviva* was also on view. A fine table of herbaceous plants was also displayed.

Mr. Walter Easlea, Eastwood, had a few choice Roses, Cherry Page being very charming. *Rosa Moyesii* from China was also noted.

Messrs. George Jackman and Sons, Woking, had a lovely grouping of Pink Elsie, a pink-flowered variety with crimson base. A large exhibit of herbaceous flowers also came from this firm.

Mr. Engelmann showed Carnations in his usual style.

Mr. G. Ferguson, Weybridge, had a fine table of Delphiniums, his mauve-coloured Mrs. Bernard Crisp being excellent.

Mr. L. R. Russell, Richmond, had a table of alpine and hardy plants arranged on rockwork.

Mr. Maurice Prichard showed Iris spuria, *Hemerocallis luteola*, *Lavatera Olbia*, *Wahlenbergia vincaeflora* and other good flowers.

A superb gathering of Sweet Peas from Mr. James Box attracted much attention. They were very finely grown.

Roses from Messrs. Frank Cant and Co., Colchester, were excellent. Diabolo (crimson), Irish Elegance, Una (white) and Rayon d'Or were noticeably good.

Messrs. B. R. Cant and Co., Colchester, also showed Roses, Cupid (a new bedding single pink-flowered variety) being very charming. Irish Glory, Rayon d'Or and Una (white) were also good. Irish Fireflame is a rich coppery variety.

Messrs. H. B. May and Sons, Edmonton, showed a group of Lantanas, Heliotropes and Fuchsias as standards, also Verbenas in high excellence.

Mr. H. Burnett, Guernsey, had a lovely lot of Carnations, including Scarlet Glow, Triumph, Carola, Mikado, Mrs. Raphael, Marmion, Enchantress Supreme and Mrs. Clode, the last finely Clove-scented.

THE YORKSHIRE GALA.

BRILLIANT weather favoured the fifty-sixth Yorkshire Flower Show and Gala, held on June 17 and the two days following in Bootham Park, York. By a general consensus of opinion the show was one of the finest in the history of the society. The arrangements made by the secretary and committee and the expeditious manner in which the judging was completed left nothing to be desired. The weather on the opening day was exceptionally hot, and had it not been for the specially ventilated marquee—which, by the way, covered an acre of ground and was erected by Messrs. Piggott Brothers, London—it is quite certain that the cut flowers would never have stood as well as they did, to say nothing of the discomfort to visitors and exhibitors. The show must rank as the finest from a floral point of view. Never before do we remember at York such magnificent and richly coloured banks of hardy flowers, Roses, Orchids, Carnations and Sweet Peas.

STOVE AND GREENHOUSE PLANTS.

The ornamental specimen foliage plants we always expect to find at York, and Messrs. James Cypher and Sons, Cheltenham, seem to have had an unusual run of luck this year, for among other successes we noticed that this firm took first place in each of the following classes: Class 8, for the best collection of plants and cut flowers arranged for effect; Class 11, for three ornamental foliage plants; Class 12, for three Crotons; Class 15, for a table of Orchids; Class 16, for twelve Orchids in bloom; and Class 17, for six Orchids in bloom. Competition in Class 1, for a group of miscellaneous plants, is always a centre of interest. This class was keenly contested, and the result was as follows: First prize (£20), Mr. J. Pickersgill; second prize (£15), Mr. William A. Holmes; third prize (£12), Messrs. R. Simpson and Son; fourth prize (£10), Mr. F. H. Ward; and fifth prize (£8), Mr. T. M. Petch. The following awards were also made:

Special large gold medal to Messrs. Cypher and Sons for a group of stove and greenhouse plants.

Large gold medal to Messrs. Backhouse for Roses and greenhouse flowers.

Large gold medal to Messrs. Mansell and Hatcher for a superb collection of Orchids.

Gold medals to Messrs. Charlesworth and Co. for Orchids, and Mr. R. C. de G. Vyner for Cacti.

Large silver medal to C. E. Simpson, Limited, for floral designs and flower display.

Silver medal to Mr. H. N. Ellison for Ferns and Cacti.

Silver-gilt medals to Messrs. Batchelor and Sons for rare Ferns, and Messrs. Peed and Son for Gloxinias.

ROCK GARDENS AND HERBACEOUS FLOWER.

Although the rock gardens make an imposing feature at York, there is, nevertheless, no special class devoted to this interesting phase of gardening. It is curious to note that Class 2, for a group of hardy plants and flowers, has come to be regarded as a class for rock gardens, although the schedule does not say a word about rocks or alpine plants. It is truly surprising to observe the great advances made in rock garden exhibits in the past few years. The whole of one end of the spacious tent was filled with rock gardens, all of them beautifully arranged and planted with flowering alpine. The grand old weather-worn and often moss-grown stone from the Yorkshire moors is in no small measure responsible for the delightful effects produced. Messrs. Broadhead and Son had a truly charming rock garden, through which ran the replica of a dried-up bed of a mountain stream. Bold masses of the Himalayan Cowslip, *Primula sikkimensis* and *Saxifraga* Cotyledon pyramidalis created drifts of colour that were perfectly in keeping with the well-arranged rock garden. A large silver-gilt medal was awarded to this exhibit.

As usual, Messrs. Backhouse and Son, Limited, York, were well to the fore among the exhibitors of rock gardens. A small stream trickled down between a rocky bank into an informal Water Lily pool at the base. Hart's-tongue and other hardy Ferns grew naturally among the rocks on either side of a little stream. *Ramondia pyrenaica*, alpine Pinks, hardy *Primulas* and *Saxifragas* in variety were all shown in great profusion. This admirable rock garden was awarded first prize in Class 2. Mr. S. Pickering, Clifton, York, was second, but the arrangement was rather formal, with a little fountain playing in the centre. This exhibit was lacking in artistic touch, and the plants were of a common type. Messrs. Artindale and Son, Nether Green, Sheffield, were third, but here herbaceous plants formed the great feature—as, indeed, they should, according to schedule. Mr. T. H. Gaunt, Farsley, Leeds,

was fourth with a very creditable exhibit of rock plants, in which *Lilium rubellum*, *Dianthus neglectus* and *Androsaces* were shown in grand form.

Mr. Clarence Elliott, Six Hills Nursery, showed a number of beautiful alpine flowers, for which he secured a large silver medal. *Campanula pusilla* Miss Willmott, with a profusion of silvery blue bells, was greatly admired.

Messrs. Kent and Brydon, Darlington, were awarded a large gold medal for a beautiful rock garden that was a near approach to Nature. The interesting *Meconopsis paniculata*, with reddish purple petals and golden anthers, was well shown, as well as a number of rare *Primulas* suitable for the rock garden.

Hardy flowers were to be seen on all sides. The tall and stately spikes of *Eremurus robustus*, mingled with *Verbascums* and *Delphiniums*, made one of the features of this great exhibition. Oriental Poppies, too, were far more in evidence than usual. Princess Ena and Jenny Mawson were shown in great numbers. Hardy Lilies, again, were represented, and magnificent effects were created with *Lilium umbellatum*.

Messrs. Wallace and Co., Colchester, had a beautifully arranged group, with *Heucheras* and *Erigerons* in the foreground and *Delphiniums* and *Eremuri* in the centre. A good number of hardy Lilies, including the beautiful *Lilium monadelphum szovitzianum* and *L. dauricum* luteum, were admirably represented. Large gold medal.

The following medal awards were also made:

Gold medals to Messrs. R. H. Bath, Limited, for Pæonies; and to Messrs. Kelway and Sons for Pæonies.

Silver medals to Messrs. Rich and Co. for cut flowers.

Messrs. Godfrey and Son for Canterbury Bells; Messrs. Longster and Son for herbaceous plants; Mr. J. W. Miller for hardy perennials; and Mr. W. R. Tanner for Violas.

Large silver-gilt medals to Messrs. Dickson, Limited, Chester, for cut flowers; Messrs. Gunn and Sons for Phloxes; Mr. G. Yeld for Irises and hybrid Lilies; Messrs. Blackmore and Langdon for Delphiniums; and Messrs. Cocker and Sons for herbaceous cut flowers.

SWEET PEAS.

Messrs. E. W. King and Co., Coggeshall, Essex, struck out with an entirely new arrangement with arches and pillars. Visitors were able to walk in and around this exhibit with ease. The varieties Hercules, Rosabelle and Anglian Orange were perhaps the pick of a very wide selection of varieties. Gold medal.

A gold medal was awarded to Messrs. Hobbies, Limited, Dereham, for a representative collection of the best varieties, of good quality.

Messrs. Dobbie and Co., Edinburgh, had a grand lot, which gained for them the high award of a large gold medal. Orange-coloured varieties were conspicuous, and included Thomas Stevenson, Edrom Beauty, Inspector, Dobbie's Orange and Melba.

Messrs. Dickson and Son, Belfast, were awarded a gold medal for a truly delightful lot of Sweet Peas.

A comprehensive collection was staged by Messrs. Bide, Farnham. Phyllis Bide (orange) and Kathleen (crimson) were conspicuous in a very fine lot, for which a gold medal was awarded.

Miss Hemus was awarded a silver-gilt medal for a collection of Sweet Peas.

GROUPS OF VEGETABLES.

Messrs. Sutton and Sons were deservedly awarded a large gold medal for an exquisite collection of flowers and vegetables of excellent quality and perfect arrangement. The Melons were remarkably good, especially the varieties Universal, Emerald Green and King George.

A large gold medal was also awarded to Messrs. E. Webb and Sons, Wordsley, Stourbridge, for an exhibit comprising *Begonias*, *Calceolarias*, *Gloxinias*, *Schizanthuses*, *Primulas*, Sweet Peas, Melons, Tomatoes, Cucumbers and other vegetables.

Messrs. Carter and Co., Raynes Park, staged one of the most attractive exhibits of vegetables and flowers that we have seen from this well-known firm. The produce was of the finest quality, and a large gold medal was deservedly awarded.

CARNATIONS AND ROSES.

Messrs. Young and Co. were successful in gaining a gold medal for a superb lot of Perpetual-flowering Carnations, which were staged in a masterful way.

In Mr. A. F. Dutton's gold medal collection from Iver, Bucks, we noted Mrs. C. F. Raphael and Marmion, two of the best Perpetual Malmaisons in cultivation.

Messrs. W. Cutbush and Son, Highgate, London, are to be complimented on the perfect arrangement of their large gold medal exhibit of Carnations, Hydrangeas and weeping standard Roses.

A silver medal was awarded to Mr. G. Prince for a choice lot of Roses, in which Juliet and Mme. Ravary were shown in splendid form.

In Class 30, for a decorative table of Roses in pots and cut blooms, Messrs. W. and J. Brown were first, and gained a large silver-gilt medal for a grand lot, which, however, did not stand the heat of the day very well; neither were they labelled. Mr. G. Prince, Oxford, was second, and his magnificent blooms of Juliet came in for a great deal of admiration.

For a collection of Roses grouped for effect, Mr. W. Todd, York, was first, and his ramblers were very fine.

The following awards were also made:

Large silver-gilt medals to Messrs. Stuart Low and Co. for Perpetual-flowering Carnations; and Messrs. W. and J. Brown for Roses.

Silver-gilt medals to Mr. C. Engelmann for Carnations; Mr. W. Lawrenson for Carnations; and Messrs. Artindale and Son for Violas and Carnations.

A first-class certificate of merit for new seedling Roses was granted to the Rev. J. H. Pemberton.

THE GARDEN.

No. 2224.—Vol. LXXVIII.

JULY 4, 1914.

NOTES OF THE WEEK.

The National Rose Society's Show.—We would remind our readers that the Rose show of the year is to be held, under the patronage of Queen Alexandra and the auspices of the National Rose Society, on Tuesday, July 7, from noon until 7 p.m. It will, as usual, be at the Royal Botanic Society's Gardens, Regent's Park, London, N.W.

The Golden Heather.—There are many varieties of our common Ling (*Calluna vulgaris*), ranging from loose, straggling sorts to some of quite a dense moss-like growth, some with white flowers, others rich crimson, and others, again, that are double. The golden-leaved variety forms a low-spreading mass, which is now very pretty, suffused with a bright golden tint, which as the summer advances becomes tinged with bronze. It is rendered additionally effective when in proximity to some of the darker kinds, and supplies a shade of colour not found in the blossoms of any of them.

Rose American Pillar.—We were rather surprised not to hear this beautiful climbing Rose mentioned at the Rose Conference held in connection with the Anglo-American Exposition at Shepherd's Bush last week. We think it is one of the most beautiful of all the Roses that have come to us from the United States of America, and at least one plant ought to be in every garden in the British Isles. It has a remarkably vigorous habit, and produces its charming deep pink, white-centred single flowers with a lavishness that is only equalled by Blush Rambler. Yet the speakers at the conference, if memory serves us aright, did not mention it. A report of the conference, when such an excellent discourse was given, and so few people were present to hear it, appears under the heading of "Societies."

The Canterbury Bell (*Campanula medium*).—This is one of the gayest of our flowers at the present time, and is a plant for all gardens, whether large or small, for it may be used with good effect as a border plant, in a large bed, or as a pot plant. In all cases it is very decorative. If the old flowers are continually picked off, the plants will remain in bloom for a much longer period than they would do otherwise. When the plants are over, their place may be filled with summer-flowering *Chrysanthemums*, and a gap thus prevented. If seed of Canterbury Bells for next year's display has

not already been sown, it should be put in without delay.

Snow in Summer (*Cerastium tomentosum*).—This well-known plant, beautiful in flower and foliage, finds a home in almost every garden. Frequently it is seen making charming edgings to pathways in cottage gardens, while it is equally at home in the rock or wall garden. It is readily increased by division, or from cuttings inserted in the open in either sandy or loamy soils. Cuttings should be taken soon after flowering and placed in a shady position. This plant is commonly known as Snow in Summer by virtue of the masses of white flowers borne over its silvery grey foliage. It is one of the least expensive plants, but it never

A native of Mexico, it has been grown in European gardens since 1841; but it has never been common in the British Isles. A shrub reaching 8 feet or 10 feet high in a state of Nature, it is smaller here, rarely attaining 6 feet, even against a wall. Its evergreen leaves are oval in shape and about $1\frac{1}{2}$ inches long, while the rosy red flowers are tubular, each nearly 2 inches long, borne from short growths from the buds on the previous year's wood. It thrives in light, warm, loamy soil, and is increased by cuttings.

A Beautiful Iris.—What a beautiful plant *Iris Monnieri* is, with its charming yellow flower, which is bold in all its parts, and carried on a spike that shoots up after the manner of that of *Iris ochroleuca*! We recently saw it growing on a large border mixed with various shades of blue *Delphiniums*. The combination was very striking, and suggested what a conspicuous bed the two would make if mixed.

Two Beautiful Annual Sedums.

Among the many beautiful Stonecrops there are one or two annual kinds that should be included. *Sedum annuum* and *S. cæruleum* are two of the best for the rock garden, both being perfectly hardy. They are often overlooked—why, it is difficult to understand, unless it is because they are not very well known. They give little trouble apart from sowing the seed, and although on dry soils they will often reproduce themselves annually, they never become weeds. At the present time they are a mass of flowers, from seedlings that have stood the winter in the open. Seed sown in spring will come into bloom later.

The Spanish Broom (*Spartium junceum*).

Like many other members of the Leguminosæ family, the Spanish Broom is able to withstand drought better than the majority of plants, and is, therefore, a valuable plant for dry soils. At the present time it is one of the brightest of our shrubs, being profusely laden with its large, bright golden yellow flowers on its dark green, Rush-like growths. Owing to its making few fibrous roots, it is very difficult to transplant when large, so that it should be planted in its permanent place while it is young. Another point to bear in mind is that it should be cut back when young to make it form a compact bush, otherwise it is inclined to get rather rough



CERASTIUM TOMENTOSUM, OR SNOW IN SUMMER, CLOTHING A ROCKY BANK.

fails to produce quantities of flowers in early summer. This *Cerastium* can be purchased very cheaply, and quickly makes sufficiently large plants to produce a good effect. The accompanying illustration serves to show that expensive plants are not always necessary for beautiful results.

Abelia floribunda at Kew.—A plant of this pretty species has been flowering well against a sunny wall at Kew, every branch being wreathed with blossom. It is at the same time the most beautiful of the *Abelias*, and one of the most tender. Even in the South and South-West Counties it requires the protection of a wall, while in colder places it is hardly a shrub for outdoor culture at all.

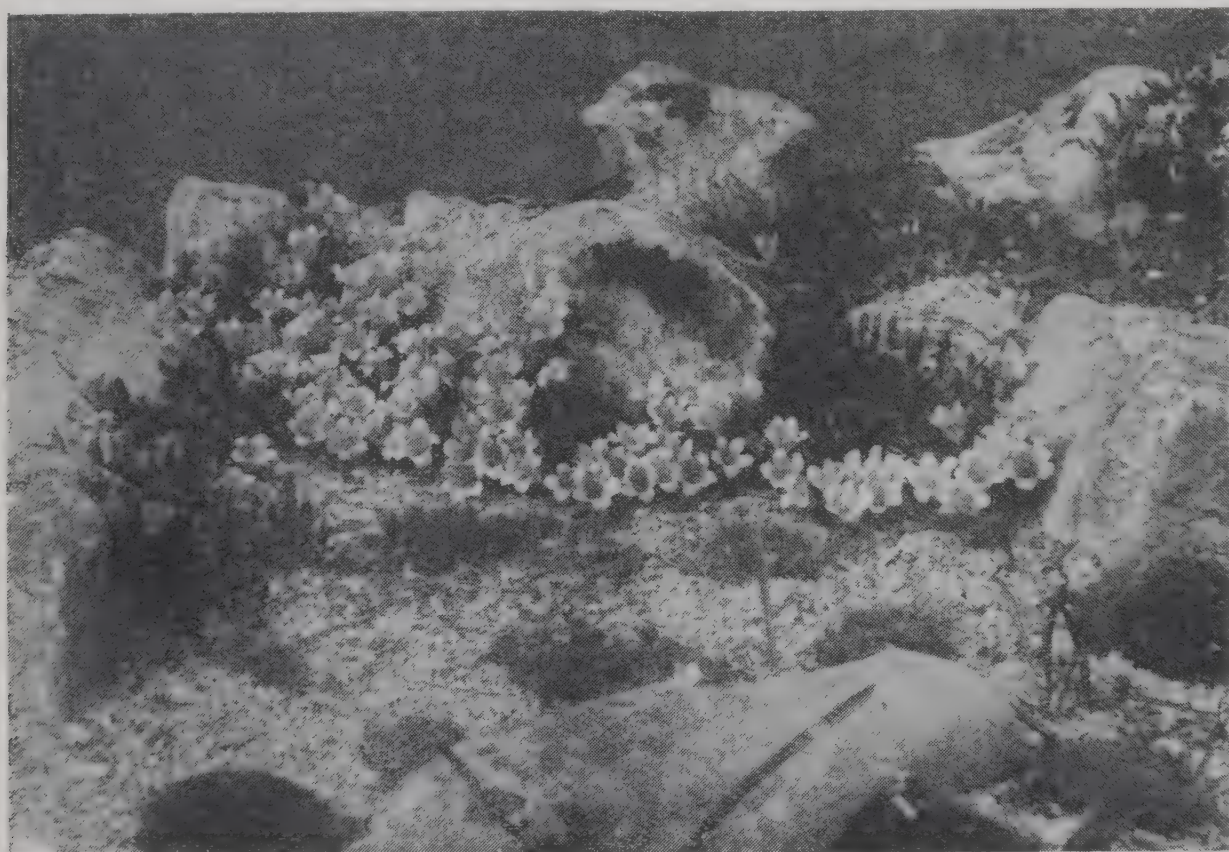
CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

White Ointment Roses.—I am sending some of the White Ointment Roses, which still continue to flower profusely, though treated with "whole-some neglect" as to pruning, mulching, watering or any kind of attention for the last ten years. Can any modern Roses do the same or vie with these in fragrance?—ANNE AMATEUR. [The Rose which you designate under the above name is one of the varieties of *Rosa alba*, probably *Belle de Segur*. They are, as you say, a delightful group and very fragrant; but, of course, after June there are no more blooms until another year. We love these old Roses, and should like to see them more generally grown, and feel sure they would repay anyone to give them good culture; but we should not plant them in small gardens in preference to the many beautiful modern

magnificent rows measuring in all nearly 200 feet, composed of the finest and newest varieties, which would prove a floral feast in the course of five weeks. The gardens do great credit to the exquisite taste of Mrs. Cecil DePree and the skill of Mr. Hunt, the gardener.—HORTUS.

Mildew on Roses.—The note (page 304) by Mr. P. L. Goddard is opportune, because mildew is one of the worst pests Rose-growers have to deal with. I have tried many so-called remedies, some of which check the spread of the fungus considerably; but at last I have come across a preparation named *Seride*, made by Messrs. Gleeson and Co., Watford, which is effective, and in a rapid manner too. All Rose-growers know that *Crimson Rambler* is more affected in its flowering than any other Rose, attacking the buds viciously—so much so that they not only are unable to open, but drop off. I have tested *Seride* on the plants and find it most effective, so much so that buds once infested are now opening properly.—E. MOLYNEUX.



WAHLENBERGIA SERPYLLIFOLIA MAJOR IN A READER'S GARDEN AT FULMER, BUCKS.

varieties that give us their blooms from June to November.—ED.]

Flowers at Saughton House, Corstorphine, Edinburgh.—A few weeks ago, being in the vicinity of Corstorphine, I paid a visit to Saughton House, the residence of Captain Cecil DePree, and on being shown round the gardens I was struck by the fine collection of rock plants grown. The notes I made may be of interest to other readers. *Primulas Veitchii*, *cockburniana*, *pulverulenta*, *Forrestii*, *denticulata alba*, *cortusoides* (four colours), *capitata*, *marginata*, *involuta* and *farinosa* were all growing and flowering profusely. I noticed that *P. Forrestii* did best on a rock wall. *P. cockburniana*, of which thousands are grown, likes a heavy loam, and Mr. Hunt informed me that it is quite perennial at Saughton House. There is also a fine collection of moraine plants grown in specially prepared beds. Many of these beautiful plants were coming into flower, and would continue at intervals for some months. Sweet Peas were also a feature.

A Beautiful Rock Garden Plant.—I enclose a photograph of a group of six plants of *Wahlenbergia serpyllifolia major* which are growing on my rock garden. The abundance of their blossom was remarkable. You will see that there were many buds still unopened when I took the photograph. The plants were put in just over a year ago in soil composed of two parts of loam to one part of peat. Limestone chips were added to the soil, and also used as a mulching. The plant seems to be a thoroughly good doer, and well deserves the very high praise which Mr. Farrer gives it in his admirable book, "My Rock Garden."—MACAULAY MORT, *Black Firs, Fulmer, Bucks.*

Buddleia variabilis veitchiana.—The border soil of many shrubberies is often found to be poor in quality, and only in exceptional cases are plants liberally manured. Some kinds of shrubs make as much progress as is desired in poor soils, and among the number the *Buddleia* above named is one of the best. Last autumn I put in a young plant eighteen months old, measuring 3 feet 6 inches

in height and 3 feet in diameter, in poor soil where strong winds buffeted it to and fro all through the winter. At the present time the plant is nearly half as large again, the young shoots being very strong and healthy. This is a suitable flowering shrub for town gardens. The flower-spikes on strong plants grow nearly two feet long, and are thickly covered in August with violet mauve blossoms. *Buddleia magnifica*, with its deep rosy purple flowers, forms a good companion.—AVON.

Sweet-Smelling Rosaries.—I am told that in some convent in Italy the nuns make beads of pounded Rose leaves, which keep their sweetness, and string them into rosaries. Can any of your readers tell me where these are to be found, as I have hitherto failed to discover the address? I am further told that it is the fashion in some English gardens to copy the nuns' example, and that it is easy to make sweet-smelling beads from one's own Roses, which can be used for a variety of purposes. If any of your readers can tell me how to set about the work, or give me any information whatsoever, I shall be very grateful.—M. L. H.

SMITHII.

When I am walking down at Kew,
I thank the kind and learned powers,
Who put the names for me to view,
Of trees and flowers.

I read beneath the Willow tree.
How exiles wept in Babylon,
And in the April Peach I see
The Persian sun.

But somewhere on a tree I found
The Latin title and therewith
A name that had a homely sound,
The name of Smith.

Since then when I those glades have trod,
I honour men I never knew,
The fellow-labourers with God
Who gave me Kew.

EDWARD SHILLITO.

Galanthus Ikariae from Seed.—The leading bulb catalogues of last autumn did not quote the beautiful Ikarian Snowdrop, as during the Turkish War it was not collected; but those who have established groups of it need not rely on the bulb merchant if they take pains to save and sow the seeds. The seed harvest of this species has been more plentiful this summer than I can remember, and from quite a small bed, not much more really than a large clump, I am on the point of sowing 1,000 seeds. They always germinate well, and I keep the young seedlings in their pans for a couple of years before planting them out in quarters that have been enriched with plenty of decayed leaf-soil. The broad, glaucous, rich green—almost Tulip-like—foliage of *G. Ikariae* renders it a very beautiful subject for pots and pans in the cold house, and outside it seems to thrive better than some of the others, even when exposed to full sun. There are numerous seedlings from it here, not yet arrived at the flowering stage, in which the mother plants were pollinated with *Elwesii* and others, including the beautiful *Imperati* var. *Atkinsii*; but as the tedious process of de-anthering was not practised, the hybridity of the resulting plants is as yet, of course, a matter of doubt.—F. H. C., Rye.

Regelio-Cyclus Irises.—It is interesting (see page 308, issue June 13) to find Mr. Jacob, even if a little late, taking to these fascinating Irises, and if he really does, he will, I am sure, have no cause to regret it. One can only wonder that he has not done so before. The reasons, I suppose, are twofold. The Regelio-cyclus forms come in early spring, when Mr. Jacob in dividing his attentions between Daffodils and Tulips, has little time left for these quaint Irises. They have not quite all the grotesque beauty of the Cushions, and therefore in this respect do not absolutely fill their places. To the cultivator, however, there is enough of beauty to warrant special care, and one has but to glance at the exquisite Mars, so faithfully reproduced on page 308 of THE GARDEN for June 13, to get an idea of one of the most beautiful of this unique hybrid race. When I first saw them in 1904, I was charmed with them beyond measure, and through the kindness of Mr. Hoog I grew a small collection of them, having both complete success and presently partial and absolute failure. So long as I kept to the "narrow way"—the lifting and annual resting which is regarded as essential—all was well, but when in utter disobedience of it I wilfully took the "broad path," the proverbial Thistles and Briars appeared, and then all was not well. It so happened that at Hampton Hill I had to deal with a very light and warm soil, and in this and a warm, sunny place I endeavoured to make these Irises a success when *permanently planted out*. More than one or two came through the first winter so well that I had great hopes of success, for they flowered well into the bargain. But the succeeding growth was not strong, and though I sheltered them with lights, throwing off all wet and roasting them for weeks, they weakened so much that a year later they dwindled away. A year or two later I tried them yet again on similar lines, with like results; and it is these experiences which have caused me to send a note upon a subject about which I have written before. Mr. Jacob says: "I believe, to do them well, cold frame culture, with the plants in the soil, is by far the best way to manage them." And he will forgive me if I bluntly say, "It is not." "The difficulty," as Mr. Jacob says, "is to prevent autumn growth," and this will come in the frame or in the open. My covered plants had exactly cold frame treatment to check growth and provide rest, but it was not enough. The only royal road to success is by a species of retarding, *i.e.*, annual lifting and resting. Nothing else appears to satisfy their needs, and nothing "prevents autumn growth," like it. Mr. Jacob says he has selected four, and intends making a catalogue "plunge" for two others to constitute half-a-dozen. But in his ultimate selection your correspondent has not "spotted" the favourite Charon, a quite unique study in old gold and bronze, that should not be absent from any collection. At a more seasonable moment for planting I hope to refer to these again.—E. H. JENKINS.

FORTHCOMING EVENTS.

July 7.—National Rose Society's Show at the Royal Botanic Gardens, Regent's Park.
Wolverhampton Floral Fête (three days). Scottish Horticultural Association Meeting.
July 8.—Flower Shows at Elstree and Camberley.
July 10.—Bury St. Edmunds Sweet Pea and Rose Show. Woking Flower Show.
July 11.—Steeton Rose and Sweet Pea Show.

PLANNING AND PLANTING THE LITTLE GARDEN.

WE would remind our readers that there is still time to enter the competition for planning and planting the little garden. We are offering cash prizes to the total value of £33 12s., as well as a number of book prizes, for the best designs sent in. The coupon this week appears on page ix. Full particulars concerning the competition can be obtained by sending 1½d. in stamps to the Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. All envelopes should be plainly marked, "Planning Competition."

SEASONABLE NOTES ON AURICULAS.

COLOURED PLATE 1497.

DURING the month of July very little top growth will be visible; but if carefully tended the plants should be making roots, and in that way prepare for their second period of growth. Every encouragement must be given by admitting all the air possible, keeping them clean, and seeing that they never become too wet or excessively dry at the roots. Where the plants occupy a sunny position, a little shade will be necessary during the middle of the day.

Seed-Sowing.—To secure a stock of any special variety, offsets must be taken; but new varieties are obtained by means of seed. I advised in a previous article the method of intercrossing different varieties, and where it has been carried out, the seed will very soon mature. Although the seed of Auriculas may be sown at any season, I always like to sow it directly it is ripe, because it germinates more regularly. It must, however, be borne in mind that Auriculas are somewhat spasmodic so far as germination is concerned, and the seed-pans ought not to be discarded after the first batch of seedlings have been removed, as others may appear at any time during the following twelve months. The ordinary seed pans or boxes may be selected for sowing the seed, and they should be filled one-half of their depth with drainage, over which is placed a thin layer of moss to ensure a free outlet for water. A mixture of loam, leaf-mould and sand should be prepared, and a fine, even surface made, on which the seed is sown. This is sprinkled rather thinly and then covered with a little finely sifted soil.

Subsequent Treatment.—The best place for the seed pots or pans is in a hand-light or small frame arranged at the base of a north wall or building. To maintain a close or damp atmosphere, very little air ought to be admitted, and the receptacles must never be allowed to get at all dry. In a month or two a few seedlings will be seen, and when they have made two or three tiny leaves they should be pricked off into pans.

T. W. BRISCOE.

The coloured plate presented with this issue depicts three of the best alpine varieties in commerce. **Golden Dustman** is perhaps the best gold-centred alpine for all-round excellence in commerce, an ideal flower of absolutely correct proportions, bearing an erect truss and often carrying twenty to thirty perfect blooms. This variety was raised by Mr. James Douglas of Great Bookham, and sent out in 1913.

Phyllis Douglas.—This very fine standard white-centred alpine is one of the best shaded flowers in commerce. The large blooms are borne very erect on stiff stems, and the plant is extremely robust.

Argus is one of the best of the old varieties. It has large blooms and abundant trusses of flowers of dark plum colour shading to vinous red, the centre being white.

We are indebted to Mr. James Douglas of Great Bookham, Surrey, for all the flowers from which the coloured plate was prepared.

THE DIANTHUSES OR PINKS.

DIANTHUSES, or Pinks, are among the choicest and most satisfactory of our garden flowers, and the species, as distinguished from the florist's Pinks and Carnations, have been steadily growing in favour, so that a short account of some of the most desirable for the garden may be of service at the present time. Unless otherwise mentioned, the following Dianthus may be cultivated in a soil of rather light and sandy character. As a rule, they prefer a sunny position. They may generally be propagated by seeds, cuttings, or pipings, which are practically cuttings, but are pulled out at a joint instead of cut across. It is well to point out that, owing to the variability of the plants and frequent hybridisation, a good deal of confusion exists regarding their nomenclature.

Dianthus alpestris.—A good Pink with rose or lilac flowers, growing about nine inches high. It is easily cultivated in the rock garden or the front row of a border. According to some, this is a form of *D. monspessulanus*. Flowers from May to June.

D. ambiguus.—This species is about fourteen inches or sixteen inches high, and flowers in July. A border species.

D. anatolicus.—The Anatolian Pink has rose flowers and reaches a height of 10 inches or 12 inches. The flowers are borne in June.

D. arboreus.—A tall, not specially attractive Pink, with clustered heads, and about two feet high. The flowers are carmine. A border plant, also suitable for the wild garden, and blooming about July. Of the same class are *D. giganteus*, rose; *D. Carthusianorum*, cherry red; *D. banaticus*, rose; and *D. Armeria*, rose.

D. arenarius.—The Sand Pink is a pleasing plant about six inches or eight inches high, with grassy leaves and fringed lilac or pale rose flowers, deeper at the base, but white in many plants. Dry, sandy soil. June and July.

D. arvernensis.—A charming flower, like a miniature *D. cæsius*, and a great beauty for the small rockery. It has small leaves and pretty pink blooms. Easily grown in dry, sunny chinks, and begins to bloom about June.

D. atrorubens.—Here we have a pretty cluster-headed Pink with blood red flowers, and about nine inches high. It is uncertain in its duration of life, and many treat it as a biennial. Dry soil in the border or rockery. The Carton variety, scarlet maroon, is very fine. June to August.

D. barbatus.—The Sweet William hardly requires mention, except to refer to a beautiful little double dwarf variety, with deep crimson flowers and only a few inches high. It is variously called Murray's Double Dark Sweet William

and *D. barbatus magnificus*. A good plant for the border or rockery.

D. cæsius.—Our well-known Cheddar Pink, which, when obtained in a good form, is one of the best. It loves a crevice of rock, especially of a calcareous nature, and is quite pretty with its pink flowers. Many poor, worthless forms exist, frequently the result of cross-fertilisation.

D. cæspitosus.—A pretty, close-growing rock or moraine Pink, not often met with. It has rosy pink flowers in summer on stems 6 inches or so high.

D. campestris.—This is another Pink we but seldom see. It has creeping branches of grassy leaves and small pink flowers, and is only a few inches high. June.

D. Caryophyllus.—This is the Carnation, and is only mentioned to remind readers that the single wild plant is pretty on rockwork or old walls.

D. corsicus, only 6 inches high, and with rose flowers, is included by botanists with *D. Caryophyllus*.

D. cinnabarinus.—In most gardens *D. cinnabarinus* is found practically a biennial. It comes well from seeds, and grows from 6 inches to 12 inches high. The clustered heads bear cinnabar red flowers in June and July. Dry soil in border or rockery.

D. cruentus.—Here we have a pleasing cluster-flowered *Dianthus*. It has deep blood red flowers on stems from 6 inches to 12 inches high, about June to August. It sometimes flowers itself to death, and should be raised from seeds. Sandy soil.

D. deltoides.—The Maiden Pink is a native plant of much beauty, and has pretty leaves and small rose flowers, borne for a long time in summer. Excellent for walls, rockeries, moraines, or the edging of the border. There are several varieties, such as *albus*, white; *glaucus*, with glaucous foliage; *superbus*, with larger and brighter flowers; and *pulchellus*, pink. *D. graniticus*, the Granite Pink, may be considered a taller and finer *D. deltoides*.

D. dentosus.—The Amoor Pink is not plentiful in gardens, though a good plant. It has large, toothed flowers of violet purple, and grows on a level spot on the rockery, surfaced with grit. Classed as a variety of *D. chinensis* by some.

S. ARNOTT.

(To be continued.)

ERIGERON ASA GRAY.

THE flowers of this new variety are of an uncommon hue—being light biscuit coloured—and borne with remarkable freedom. Few herbaceous plants are so easily grown as *Erigerons*, and they are certainly very effective when planted in masses. The variety *Asa Gray* grows about eighteen inches high, forming a perfect mass of flowers that are welcome in the foreground of the herbaceous border. This variety recently gained a certificate of merit from the National Hardy Plant Society when shown by Messrs. Artindale and Sons, Sheffield.

EXHIBITING ROSES.

HINTS FOR THE NOVICE.

AS soon as the amateur becomes thoroughly imbued with the love of Rose-growing, he is anxious to compare his skill with his fellow-grower at the shows. This spirit of rivalry is seen most prominently by those who are compelled to travel daily from the suburbs to town, and it is quite amusing, and also gratifying to the old stager to hear the chaffing going on in the train as to the merits or demerits of certain Roses.

While the experienced exhibitor will learn nothing new from the few hints penned herewith,

details for the shows that will occur later in July. A most important detail is that of disbudding. This is an operation requiring much judgment. Generally, the central bud on a shoot is retained, and all the others removed as soon as they are of the size of small peas, and even earlier; but one must be careful the central bud is perfect and not damaged by frost or insect foe, otherwise this bud should be removed and one of the best of the side buds retained. The wood-buds, i.e., those growths that start out below the bud, should be rubbed out also, so that all the strength of the shoot can be concentrated on the one bud. A plant should not be burdened with too many shoots. Three or four, or at most five, are ample. Feeding the buds may still be carried out. Good

liquid manure, made from cow-manure and soot or from sheep-manure, is as good as anything; but a good, quick-acting stimulant, such as guano, will go a long way to improve the quality of the blooms.

A number of shades should be procured ready to place over the blooms three or four days prior to the show. If a cheap article is desired, what are known as Zulu straw hats, securely fastened on to a Bamboo cane, answer very well, although there are proper shades to be had of the horticultural sundriesmen.

Some of the thin and pointed Roses, i.e., those not very double, should be tied the day before the show. This is done with a piece of German wool. Allow the outer petals to be free, but tie the heart of the bloom when in its young stage, and when quite dry. Instead of tying the wool in a knot, give it two turns and leave the ends long; then it may be tightened if necessary or released easily. These ties are kept on the blooms until the last moment.

Boxes must all be in readiness, and some nice green moss obtained to show off the blooms to the best advantage. Proper exhibition tubes are essential, those known as the "Foster" or "West" being excellent. A Rose always looks best when well raised above the moss. So many beginners seem to ignore this detail. I have seen beautiful Roses cut with short

stems and dumped down on the moss, which quite spoilt them, although, perhaps, their quality was superior to those that gained the first prize. A good deep lid should belong to each show box, and be careful that the blooms are put down low enough to escape injury by the lid. The flowers can be arranged properly when at the show.

When to Cut Blooms.—As to when the blooms should be cut, I would advocate late in the evening preceding rather than in the early morning of the show day. There are various reasons for this, one being that in the early morning most blooms look fresh, and one may be deceived when too late. Allow the blooms to have plenty of water. I would prefer to take round with me a large jar full of water and place the blooms therein immediately they are cut, allowing them to remain in the jar



THE NEW ERIGERON ASA GRAY.

it is hoped the beginner may be helped so that he may be enabled to win prizes this year. Of course, as to cultural hints, he has had to rely upon past notes, as the exhibitions are now upon us, and by the time these lines are in print the City of London Rose Society will be holding its second exhibition at the Cannon Street Hotel. I would urge all who wish to become exhibitors to join the National Rose Society, and this can be done at once by writing to Mr. E. Mawley, Rosebank, Berkhamsted, who will then send various books and pamphlets that will be of much value to the exhibitor.

To be a successful exhibitor, one must possess a goodly number of the exhibition varieties. Such varieties are listed in the National Rose Society's schedule. There is yet time to attend to various

in a cool room or cellar, as long as possible before transferring them to the boxes. Roses keep much better, even those cut for the rooms, when given plenty of water and when cut late in the evening. Referring again to the boxes, there is a standard of size set up by all societies affiliated to the National Rose Society.

A good deep box for spare flowers should be taken to the show. This ought to contain a good number of young flowers, for it is surprising how quickly the blooms develop, and often those we judge the best overnight fail at the last moment. Read carefully the standard of an ideal exhibition bloom as laid down by the National Rose Society in its schedule, and also read the authorised rules for judging as defined by the same society. This will give the exhibitor a good idea of the standard to aim at. Upon the journey to the show, keep a watchful eye on your boxes. Somehow the railway porter likes to carry Rose boxes upside down, so that the water trickles down his neck, a detail that may tend to keep him cool, but will be fatal to the Roses.

Classes to Show In.—In your first attempt at showing, do not aim too high; that is, enter for six blooms before you strive to win the prize for twelve. Be careful to have the names correctly placed, and in staging put the largest blooms in the back row and the smallest in front. When practicable, place a pale Rose next to one of a deeper colour, but do not exclude a good specimen on this account. Quality will tell with the judges, not huge, coarse blooms, but those having beauty of form and finish and purity of colour. If you enter in two or three classes and find upon arrival at the show your blooms are inferior to those of your competitors, concentrate upon one class only, and put in your best blooms, when you may get a look in, whereas, if all the classes are attempted, you may fail in all. Be careful to fill the tubes with water as soon as you arrive at the show. I have seen lovely blooms ruined by want of water which is either lost on the journey or has been absorbed by the flowers.

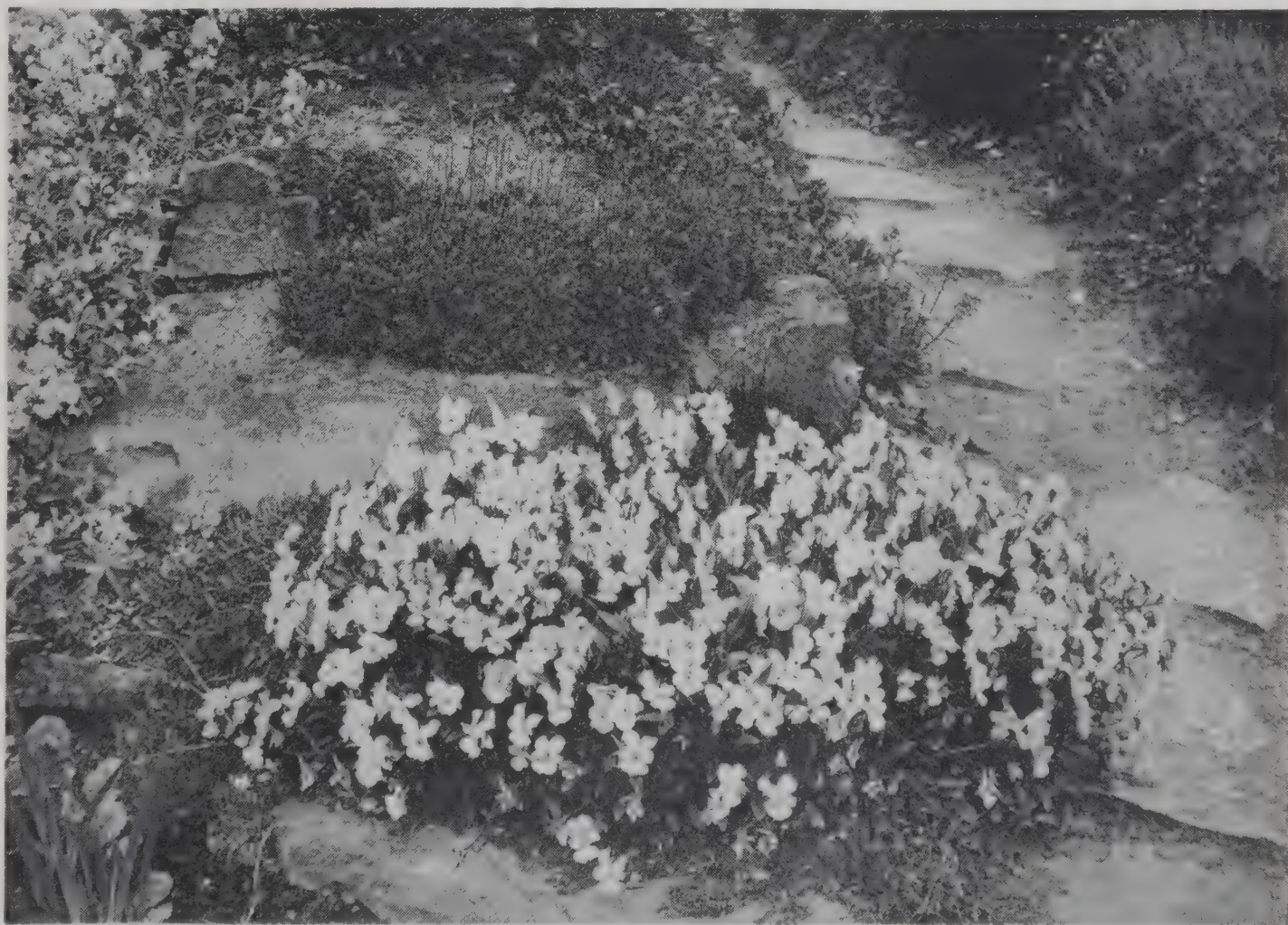
"Dressing" Blooms.—Do not be tempted to alter the character of a bloom. What is known as "dressing" a bloom is rightly condemned by the judges. This takes the form of turning the petals back to make them appear larger, and some of our noted growers are great offenders in this respect. When you have arranged the blooms to your satisfaction, cover them with the lid, merely tilting it a little in front to admit air, and keep it thus until ordered to remove it. Ties are kept on the blooms until the time when the bell rings to depart from the tent. Do not fail to remove the ties, as judges are not allowed to do so, and this would militate against your success. Take notes carefully of Roses that gain special medals as best blooms in the show, as generally such sorts are worth growing in quantity for exhibition. Finally, do not be discouraged if you do not win a prize. Take your beating manfully and make a resolve to grow more and give greater attention in the future, when you will find success will come. DANECROFT

VIOLAS AND VIOLETTAS FOR THE ROCK GARDEN.

IF there could be found no valid excuse for importing all the flower beauty of the Viola into the rock garden—much of it, indeed, would be better accommodated elsewhere—there is every reason for introducing that phase of it which it is calculated would show to greater advantage there than in other parts of the garden. In saying this one has particularly in mind the exquisite beauty and charm of the Violettas, that intermediate group which comes between the larger Tufted Pansies (Violas) and others like cornuta and its varieties. Of these it may be safely urged that they are peculiarly adapted for the rock garden, more perhaps because of the dainty grace and lowly stature with which they are endowed,

a considerable colour range, they are calculated to please a large number who do not judge beauty by size alone. Another item of importance in regard to these plants—it may also be said of *V. cornuta* and others—is that they flower long and continuously, affording a wealth of cool, fresh-looking blossoms long after the usual occupants of the rock garden are past and gone, and in that way making their presence felt in no uncertain degree.

Apart from the Violettas, which are a host in themselves, are others which are even more wealth-affording in beauty and floriferousness, although they are less dwarf, and it may be less dainty-looking also. I refer more particularly to such as *V. gracilis*, *V. cornuta* and their varieties, than which perhaps none are better suited to the purpose one has in mind. The rich colour masses these afford, no pen-picture could ever portray. They are essentially garden plants, and those



A SEEDLING VIOLA IN A SMALL ROCK GARDEN.

and which would appear to fit them for association with many choice things.

Then, of course, they are distinctly of the perennial class, an invaluable attribute that should go a long way to making these flowers more popular for the purpose one has in mind. It may as truly be urged, of course, that other types of Violas are strictly perennial, and quite suited to the rock garden also. What I particularly desire to point out, however, is the value of the Violettas when permanently planted, and if left alone for two, or it may be three, years they will have had an opportunity of fully demonstrating their worth. So much can scarcely be said of them if it is found necessary to disturb them each year, since in a single season only a tithe of their flower beauty will have been revealed. Veritable carpeters of the soil, though smaller in growth than some, miniature in blossom and embracing

who would see them at their best must see them within the limits of the garden. These, like the Violettas, may go on for several years, and give a good account of themselves each successive year. Some, indeed, after five or six years in one position, showed but little sign of deterioration, the plants meanwhile affording a carpet of fresh green growth long enriched and ornamented by flowers. To urge the hardiness of plants with such durative powers as this might appear superfluous, yet hardiness and longevity combined are among their greater assets.

To those who would embrace varieties of each of these I would draw attention to the following. Of the cornuta class, alba, pallida, alba compacta, Blue Gem and purpurea are all worthy of consideration. Candidly, if I were restricted to one variety of this set, the last would certainly be first—first, because of the rich imperial purple

shade, which in my opinion places it head and shoulders above the rest; and first, again, because of the good lesson I learnt from my flower-loving daughter, who, charmed with its rich colour, culled the blossoms with their 6-inch-long stalks, and, inserting them with their own leafy stems in white china bowls, produced a singularly beautiful effect. It is the only one of the cornuta class that in my opinion is capable of such high ornament in the garden and the home; hence it should have greater claims upon those who seek the dual services of so good a plant. In the *V. gracilis* set, apart from the excellent typical kind, which is worthy of all thought, the varieties Purple Robe, lutea and sulphurea should be mentioned, interest centring round the latter, while great flower beauty and richness dominates the other two.

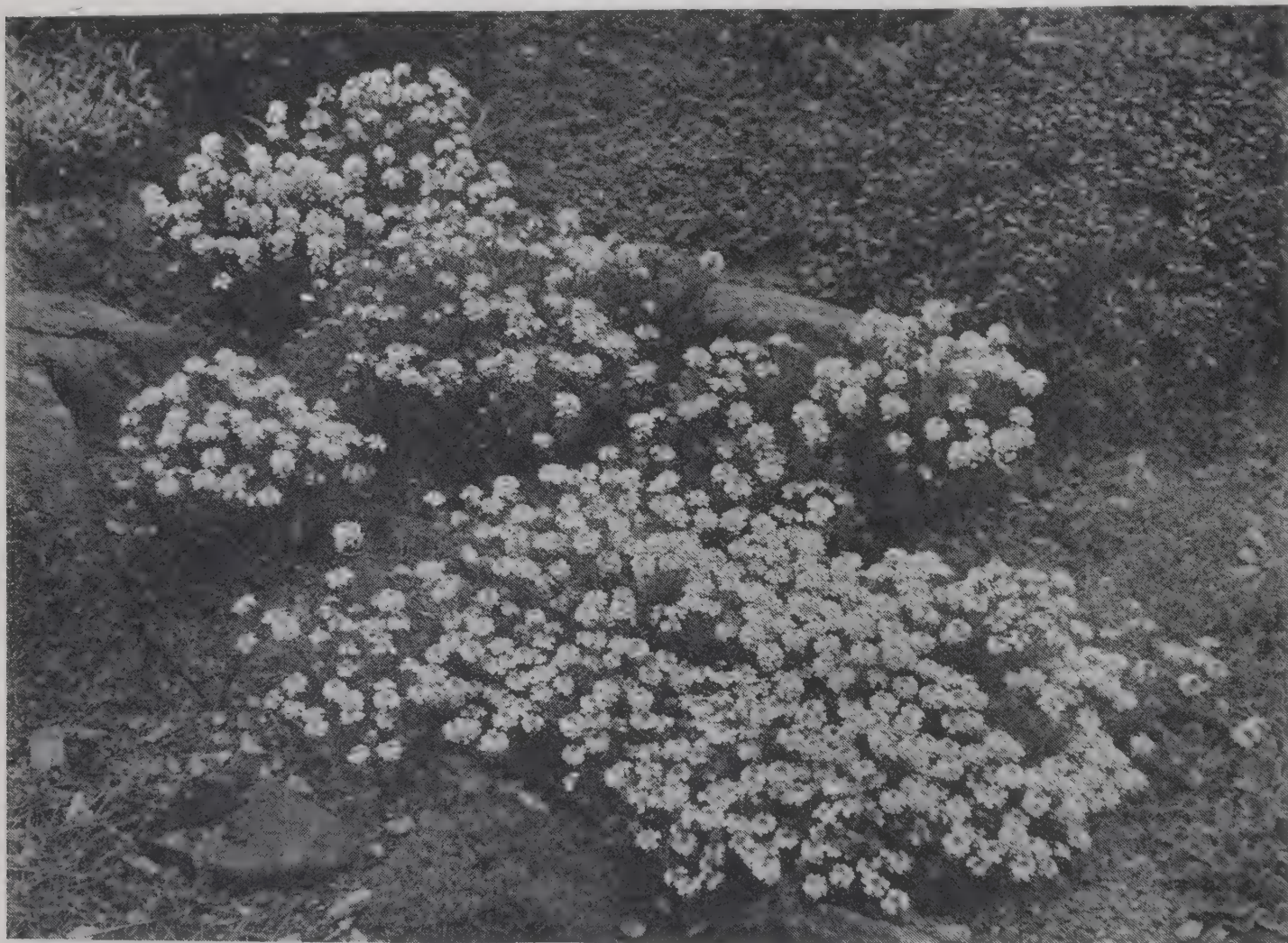
A small set of the *Violettas* should include Rock Blue, Rock Yellow, Purity, Sweetness (white, with yellow eye), Miss G. Jekyll (yellow and

plants drop their seeds in the happiest of places, and if possible, because of the new pictures such things create, they should be left to display their worth.

E. H. JENKINS.

ÆTHIONEMA WARLEY HYBRID.

THE *Æthionemas*, extremely dainty plants, somewhat resembling a refined *Iberis*, are extremely useful and decorative subjects for hot, sunny positions in the rock or wall garden, though without perfect drainage and very gritty soil they are inclined to go off during the winter. One of the most startling novelties in this connection is to be found in the hybrid referred to at the head of this note, a reproduction of which appears below, showing a colony growing in Miss Willmott's lovely garden at Warley Place. The plant originated as a seedling from *Æ. armenum*, and forms a dense, compact bush 6 inches to



ÆTHIONEMA WARLEY HYBRID, A BEAUTIFUL ROCK PLANT WITH RICH ROSE-PINK FLOWERS.

primrose), Lavinia (lavender), Eileen (deep blue, yellow eye), Robbie Jenkins (perfect in form, white, flushed yellow, quite one of the smallest), Diana (primrose) and Gold Crest (a very profuse bloomer).

Cultivation.—In this direction the plants ask for nothing more than a moderately deep and good loamy soil, an item of greater importance being, perhaps, a cool rooting medium, though even here they are less exacting than some. In any case the higher, drier and sunnier positions of the rock garden are places to avoid, while carpeting the flatter places in the line of vision where the flowers would show to advantage. In the case of the cornuta and gracilis sections, compactness of growth may be secured by annual autumn pruning, which encourages, as it also ensures, basal growth of increased vigour. This is important. In addition, a little rich soil mulch will also assist. Occasionally some of these

9 inches in height, producing from mid-April immense quantities of flowers of a deep pink colour, which lasts well into June. So rich is the colouring of the flowers and so compact the habit that at first sight it suggests *Daphne Cneorum*, and is by far the best of the family, beautiful as many of them are. As the name indicates, this charming plant was raised by Miss Willmott at Warley, and has since received the Royal Horticultural Society's award of merit. No more showy plant could be found for a sunny spot in the rock garden or retaining wall than *Æ. Warley Hybrid*, and, given a free, gritty root-run and slight protection against winter damp, should the season be a wet one, there is no difficulty in its cultivation. Propagation is readily effected by cuttings, and the greatest effect is obtained by grouping the plants as seen in the illustration.

REGINALD F. MALBY.

SOME LITTLE-KNOWN CLIMBERS.

THE SCHIZOPHRAGMAS.

SCHIZOPHRAGMA is an Eastern genus of Saxifragaceæ closely allied to *Hydrangea*, the chief difference between the two genera, from a horticultural point of view being noticeable in the sterile flowers.

In *Hydrangea* each sterile flower is made up of four bracts, whereas in *Schizophragma* one bract only appears with each sterile flower. For many years *S. hydrangeoides* was confused with *Hydrangea petiolaris*, and plants obtained under the former name almost invariably proved to be the latter. Now, however, two species of *Schizophragma* may be procured, thanks to Messrs. Veitch and Mr. E. H. Wilson, the latter gentleman having collected and forwarded seeds to the Veitchian

firm about twelve or thirteen years ago. The two species are *S. hydrangeoides* and *S. integrifolia*. The former species was described in 1835 by Siebold and Zuccarini in the "Flora Japonica," page 58, t. 26. On several occasions it has been included in the botanical collections of both Chinese and Japanese travellers. Oldham, for instance, obtained specimens in Nagasaki as long ago as 1862. Seeds of the true plant have also found their way to this country earlier than those forwarded by Mr. Wilson, for ten years ago a good-sized plant existed in the late Mr. Chambers' garden at Haslemere. In habit it bears a close resemblance to *Hydrangea petiolaris*, for it has similar bright brown, scandent branches which climb by means of aerial roots, and the leaves are somewhat similar in shape. They are broadly ovate or, at times, almost cordate, with coarsely toothed margins, and are often from 5 inches to 7 inches long and 4 inches or more wide. They are hairy on both surfaces, particularly on the veins. The flowers appear in large, terminal corymbs, an indefinite number of fertile flowers being intermixed with a few sterile blossoms, consisting of one bract only. The bracts are white, 1 inch to 1½ inches long, and three-quarters of an inch to 1 inch wide.

S. integrifolia is a native of China. It was collected by Professor A. Henry in Szechuan, and was figured and described in Hooker's "Icones Plantarum," t. 1934, in 1890. Seeds were originally introduced to this country by Mr. Wilson during his first visit to China. Like the older plant, it has scandent branches, which bear aerial roots after the manner of the Ivy. It, however, differs widely in other respects. The leaves are ovate or ovate-lanceolate, often glabrous, but sometimes bearing a few scattered hairs on the under surface. The larger leaves are up to 8 inches or 9 inches in length and 4 inches wide.

Light, well-drained loamy soil containing leaf-mould appears to suit both plants, and they grow well against walls, on the upturned roots of trees, or on tree trunks. As they become better known they will doubtless find favour for planting against walls on account of the self-clinging habit. W. D.

ROYAL HORTICULTURAL SOCIETY'S SUMMER SHOW.

AS we go to press the great summer show of the Royal Horticultural Society is being held, by kind permission of Mary Countess of Ilchester, in the charming grounds of Holland House, Kensington. We understand that visitors to the Show will be admitted to the private gardens at Holland House each day on payment of 1s., the proceeds to go to charities. Most of the exhibits are of exceptionally good quality, Roses, Sweet Peas, Orchids, hardy flowers and trees and shrubs being dominant features. Here have been gathered together all that is best from our British gardens and nurseries, and it is to be hoped that the public will visit the show in their thousands, and so compensate the Council and the various committees for their labours in bringing together so magnificent a display. Naturally, this show is of a different character to that held at Chelsea earlier in the year, but it is none the less interesting. An exhibit that everyone ought to see is that arranged by Messrs. R. Wallace and Co., where Japanese Irises border a natural-looking pool of clear water. We have no hesitation in saying that never before have these beautiful Irises been shown in better condition in this country, and when we remember that entire plants have been lifted and transplanted from Colchester to Kensington, we do not think any praise is too high. To the Council and the various officials of the Society we wish to tender our thanks for their unfailing courtesy and help freely given to enable us to report at least the greater portion of the show.

HERBACEOUS PLANTS.

There is now on view in the historic grounds of Holland House a display of herbaceous flowers and hardy flower gardening of overwhelming beauty, one, while rich in flower colour, is more surpassingly rich in high cultural excellence and that suggestiveness which in outdoor gardening is of the greatest service. In this latter our readers will realise the finger-post, and, following it, make of their gardens things of pleasure and delight. In no department is this more true than in the Iris and water garden arranged by Messrs. Wallace and Co., Colchester, at the left of the great tent near the entrance. Here our readers will quickly find a group of a thousand or more square feet of sumptuous beauty arranged in the best of taste. We have, indeed, never seen the great water-loving Irises of Japan displayed more finely, never in such profusion or with flowers of such magnificent proportions. In colour variety there is equal richness—white, purple, violet and rose in self, or these in combination, which defy description. Certainly the gem of the whole is Morning Mist, a study in white and blue, the flowers of Oriental

splendour reaching to dinner-plate proportions. It is in every way a magnificent plant. Rosy Dawn, Mikado (white, rosy lines), Distant Mountain (white, violet veins and rosy standards) and Recumbent Dragon (purple) are among those to be noted. The water portion is approached by stone steps, with *Spiræa palmata*, the newer *Astilbes*, *Funkias*, *Trollius chinense*, *T. pumila yunnanense*, *Rodgersias* and other good plants around. In fine, it is a group of remarkable beauty, the like of which we do not remember to have seen before.

At the other extreme of the same tent Mr. Amos Perry has a remarkable *Delphinium* group, a family which he has largely made his own. The flower-spikes, shown in their hundreds, reveal superb cultural excellence, and, grouped together in large blocks, are seen to advantage. Mrs. Creighton (rich dark purple, double), Lizzie (fine pale blue single), Edric Kingscote (single blue, white eye), Midas (iridescent blue), Evelyn and King of *Delphiniums* are some of the best. In addition there is to be seen a fine run of the newer *Belladonna* types, as *Lamartine grandiflora* and Mrs. Brunton. *Lilium Roezlii* (refined orange), *Dianthus Napoleon III.*, with single *Dianthus*es of sorts, Day Lilies and other Lilies, are some of the more imposing things that must be sought out in this fine group.

In this same tent Messrs. Carter and Co., Raynes Park, have set up a superb water garden exhibit, the dominant feature naturally being a fine lot of Japanese Irises. These are arranged in bold, informal groups—just that kind of thing capable of fine interpretation in the garden, hence justifying exhibition work as a whole. Of the more conspicuous of the Irises are Albertino (white), Tokio (rose and white), Admiration (a fine rich purple with white), Morning Mist (bluish white—the greatest, from more than one point of view, of all this race) and Yvette Guilbert (purple, white veins). *Funkias*, *Adiantum pedatum*, *Spiræas* and Bamboos either back the group or margin the water, which in its turn is delightfully ornamented by Water Lilies. The grass turfed banks and the excellent execution of the whole add both naturalness and charm. Then, in a sort of annexe leading from the main exhibit and in part revealed therefrom, are Irises again, a nice lot of Bamboos in graceful plumage, together with a fine central grouping of *Campanula persicifolia* in blue and white. An excellent arrangement worthy of a great firm.

Then, in an opposite group in the same tent, Messrs. Waterer, Son and Crisp, Bagshot and Twyford, are setting up an excellent mixed arrangement of herbaceous and rockwork plants, the whole forming a pretty and effective group. In this we noted rich masses of Larkspurs, *Gaillardias*, *Primula littoniana*, *Wahlenbergia vinæflora*, *Pentstemons*, *Campanula pulloides* and a great variety of plants suited to the rock garden.

Mr. G. Reuthe, Keston, Kent, will be found showing an interesting variety of alpines, shrubs and herbaceous flowers. His finer things are *Abelia floribunda*, *Crinodendron Hookeri* (also

known as *Tricuspidaria lanceolata* and *T. dependens*—the latter, we believe, erroneously), *Rhododendrons intricatum* and *camelliæflorum*, *Ononis fruticosa*, rare and beautiful in rose pea-shaped flowers; together with *Carpenteria californica*, *Andromeda speciosa*, *Lilium philadelphicum*, *L. pomponium*, *L. Martagon* G. F. Wilson, *L. Willmottiae*, *Orchis foliosa* and a great variety of alpines. Heaths are very charming, while *Edelweiss*, *Genista* and the smaller of the rock-loving *Hypericums* are also very beautiful.

Messrs. William Cutbush and Sons, Highgate, N., are showing a fine lot of Larkspurs, Bamboos and Liliacs in variety. Phloxes, *Romneya Coulteri* and such things as *Campanulas* are being well shown.

Messrs. Barr and Sons, Covent Garden, and Taplow, will be found displaying a very fine collection of *Delphiniums* and English Irises, the latter constituting a good succession to the Spanish Irises of mid-June. These are very fine, their broad petals (falls) rendering them highly distinct. *Iris lævigata* is also much in evidence. In addition there may be seen a good array of *Iris ochroleuca*, together with Day Lilies, *Ixias*, *Calochortis*, such Lilies as *canadense*, *washingtonianum*, *pardalinum*, *Roezlii* and others.

Mr. James Box, Lindfield, Hayward's Heath, is displaying in the Upper Tent a remarkable exhibit of hardy flowers, of which cut herbaceous plants and Water Lilies in pools are the most dominant features. The group, of unusual formation, is showing two sides at the entrance and exit of the tent, and is composed chiefly of *Delphiniums* in blue and violet, with a great mass of white *Iris lævigata* in front and *Spiræa palmata* at the sides. At right and left flanks are groups of Bamboos bowing graceful plumes, while immediately beneath are stands of *Ne Plus Ultra Gladioli* mirroring both into fuller life. Centrally placed is a pool, and herein are Water Lilies at once beautiful and cooling in effect. *Gladiolus America*, G. Golden West and G. Halleyi, with the moisture-loving *Primulas*, are among those seen. Phloxes of several groups are also well shown.

Messrs. G. and A. Clark, Limited, Dover, are setting up a fine group of herbaceous plants, notably *Delphiniums*, *Astilbes*, Japanese Irises, *Wahlenbergias* and Ferns. Of the former, Rev. E. Lascelles, Alake, Nubian (a very dark form) and Queen of Spain (white and blue) are the more important. *Verbascum Warley Rose* is also finely displayed, and is certainly a good addition to this group.

Messrs. Whitelegg and Page, Chislehurst, are displaying a fine lot of *Delphiniums* in almost endless variety and excellence. *Wahlenbergia vinæflora* is also one of the fine plants to be noted in their group.

Messrs. Phillips and Taylor, Bracknell, Berks, are arranging a fine exhibit of water gardening in conjunction with Water Lilies and other suitable plants. In the latter section the newer *Astilbes* find an important place, while about and around are to be seen *Juncus zebrina*, *Acorus japonica*, *Pentstemon*, *Sagittarias* and quite a representative

display of the Marliac Water Lilies. The exhibit is very charming, suggestive and educational.

Messrs. H. J. Jones, Limited, Lewisham, are displaying herbaceous Phloxes in the highest excellence, both in the cut state and in pot-grown examples. The latter, indeed, are of great garden value. They display height, habit and those other particulars which are of such inestimable value to the amateur. The group, too, shows how these things can be hurried along; how with good, or, shall we say, intelligent cultivation, they may be presented to view in the exhibition tent quite worthy of the garden. The best varieties—it is, of course, a question of taste—are Elizabeth Campbell, salmon and white; G. A. Strohlein, scarlet and crimson; Meteor, deep pink; R. C. Pulling, deep pink, a sport from the above; Frau Ant. Buchner; Dr. Charcot, mauve; and Baron van Dedem, orange scarlet, which is perhaps one of the finest and the best. The excellence of the exhibit and its high decorative merit will, we think, appeal to all.

MISCELLANEOUS STOVE AND GREENHOUSE PLANTS.

Cannas and Zonal Pelargoniums are capitally shown by Messrs. H. Cannell and Sons, Eynsford, Kent. The former are always a brilliant feature of this firm's displays, and, as usual, they are represented by a most interesting series of varieties and in the glorious colours for which these plants are famous. Zonal Pelargoniums have for many years been kept well to the front by this firm, who have always exhibited large and handsome bunches of all that is new and choice, and on this occasion there is much to interest and please in the splendid sorts set up for inspection.

Zonal Pelargoniums are also set up by Messrs. Carter Page and Co., London Wall, E.C. This display is quite good, and includes a capital representation of the more popular and reliable kinds.

Cannas in a mixed group are shown by Mr. A. H. Cole, 326, Camberwell New Road, S.E. It is pleasing to find these plants represented by another firm. The sorts are good and the plants very interesting.

Ferns and Geraniums from Mr. A. Donnithorne, Ashburton, Devon, combine with Begonias to make an attractive display. These are to be seen in Tent No. 1, where the combined effect is quite pleasing.

Messrs. W. J. Godfrey and Son, Exmouth, Devon, in addition to beautiful Campanulas (Canterbury Bells), have a beautiful display of all species of the Pelargonium and Solanums. The Pelargoniums, which this firm have done so much to develop, are highly attractive, and they represent the various types in charming fashion. The Solanums (*Wendlandii*), too, are novel and pleasing.

Fuchsias and Zonal Pelargoniums are represented in fine form and condition by H. J. Jones' Nurseries, Limited, Ryecroft Nursery, Lewisham, S.E. Mr. Jones, who has done much to improve the Zonal Pelargonium, is showing these richly coloured flowers in excellent form and in capital variety. He has many grand novelties of the Paul Crampel type that show marked advance. Of the newer Pelargoniums the following are noteworthy: Mrs. R. C. Pulling (a giant white), Mrs. G. Lovelock (crimson scarlet), D. B. Crane (bright rose), Mrs. F. Ambrose (deep salmon self), Lottie

(rosy scarlet) and Fred Gulliver (orange red). These are just a few of the good things, of which there are many. Hybrids from *Fuchsia triphylla* are beautiful, and of these there is now a most interesting series, all deserving extended culture. The colours of these flowers are now quite comprehensive. This exhibit is arranged with a collection of herbaceous Phloxes and beautiful Campanulas.

Hydrangeas in charming variety, Fuchsias and Zonal Pelargoniums are well shown by Mr. Philip Ladds, Swanley Junction, Kent. This exhibitor, as is his wonted custom, shows plants that are well grown. Good culture is very noticeable both in the character of the plants and in the quality of the flowers, and they are set up in an attractive way in Tent No. 7.

Five hundred species and varieties of stove and greenhouse and British Ferns are exhibited in the Large Tent by Messrs. H. B. May and Sons, Limited, Dyson's Road Nurseries, Upper Edmonton, London. This is a truly beautiful display, such as we are always accustomed to see put up by this firm of Fern specialists. Taste in arrangement and quality of the various plants is paramount in this exhibit, and there is much to interest and please the Fern-lover and others. Noteworthy examples are *Polypodium Vidgeri*, *P. Knightæ*, *P. mandaianum*, *Davallia brasiliense*, *D. fijiensis*, *D. Veitchii*, *Adiantum Veitchii*, *A. grossum*, *A. farleyense*, *Lygodium japonicum* (a fine specimen, 12 feet in height), *Gymnogramma superba* (golden), *G. Mayii* (silver) and a host of remarkably beautiful examples of other species.

Messrs. J. Hill and Son, Lower Edmonton, have a superb group of stove and greenhouse Ferns arranged in the Large Tent that is a source of considerable pleasure to the thousands visiting this great show. There are more than two hundred species and varieties representing all the better well-known subjects, and the group leaves nothing to be desired. Remarkable examples of Tree Ferns and *Cibotium Schiedeii*, *Dicksonia squarrosa*, *Cyathea dealbata*, a unique specimen of *Platynerium grande* (the Stag's-horn Fern), *Polypodium mandaianum*, *Dicksonia Barometz*, *Polypodium quercifolium* (a grand specimen) and numerous *Davallias* in endless varieties are included. The group is edged with beautiful examples of tinted *Adiantums* in charming variety.

At the south-east corner of the Large Tent Messrs. W. Cutbush and Sons, Highgate, London, N., have a large group of a comprehensive character. Cannas are bright and inspiring, and there are masses of dwarf baby Roses and Carnations in charming variety. This group is finished off pleasingly with Ferns and other dainty subjects.

A large group of stove and greenhouse plants is set up by Mr. L. R. Russell, Richmond, Surrey, embracing a great variety of most interesting subjects. Among the more noteworthy in this charming group are the following: *Alocasias*, *Anthuriums*, *Marantas*, *Crotons*, *Dracænas*, *Aralias*, *Nertera depressa* (the Coral Plant), *Caladiums* and a diverse variety of other beautiful foliage. All combine to make a display worthy of this firm.

Mr. Vincent Slade, Taunton, has a number of handsome bunches of Zonal Pelargoniums set up in Tent No. 1. This grower has for many years devoted attention to these richly coloured subjects, and his exhibit on this occasion is just what we might reasonably expect of him.

The Right Hon. Colonel Mark Lockwood, M.P. (gardener, Mr. G. Craddock), Romford, makes a most attractive exhibit of well-grown Fuchsias. The displays from this source are always very

pleasing, and the character of this exhibit is distinctly beautiful and meritorious.

Streptocarpus in Tent No. 7 and *Caladiums* in Tent No. 6 from Messrs. John Peed and Son, West Norwood, S.E., are noteworthy exhibits in this great show. The former subject is represented by well-grown plants of a beautiful strain, and the latter are, as usual, shown in all their glory of rich and varied colourings. The tropical weather now being experienced suits these plants splendidly, and there is little risk of the plants suffering on this account. The varieties are very interesting and the foliage is well coloured.

BEGONIAS AND GLOXINIAS.

The beautiful exhibits of Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath, are always eagerly sought after by lovers of the tuberous-rooted Begonias, as this firm's representation of this gorgeous subject never fails to attract. The blooms are to be seen in the highest degree of good culture, and such double varieties as *Lady Carew* (a lovely rose), *Princess Victoria* (salmon pink), *Lady Cromer*, *Empress Marie* (white), Mrs. James Reid, Mr. James Douglas, Lord Methuen (brilliant scarlet), *Violet Langdon* (a beautiful flesh pink), *Rose Superbe* (rose of a pale tone) and many other equally charming varieties go to make an exhibit that well maintains the reputation of this well-known firm.

Begonias and Gloxinias are set up in attractive fashion by Mr. A. Gwillim, Sidcup, Kent. This grower has a beautiful collection of the better-known named varieties, the more notable sorts being *Sidcup Beauty*, *Lady Cromer*, *Miss Ada Britten*, Mrs. H. Harris and Mrs. J. C. Gwillim.

A magnificent table group of Begonias from Messrs. Thomas S. Ware and Co., Feltham, attracts considerable attention, both on account of its quality and its representative character. This firm have done much to develop this truly gorgeous subject, and never fail to set up an exhibit that worthily maintains their position as one of the leading specialists. The plants are flowering freely and are carrying blooms showing the highest cultural skill. A few of the better sorts in this collection are the following: Mrs. Maurice Pope (charming salmon rose), *King George V.* (rich salmon of the highest quality), *Countess of Dartmouth* (cream, edged and flaked rose), *Gladys Valentine* (pale salmon), Hon. Mrs. Ronald Greville (a beautiful cream), Mrs. Andrew Tweedie (another excellent cream-coloured sort), Hon. Mrs. Maurice Glyn (apricot) and a superb rich salmon of a specially attractive kind named *Duchess of Marlborough*. Space prevents us mentioning more than a tithe of the good things in this exhibit.

Messrs. Webb and Sons, Wordsley, Stourbridge, as usual, have made a charming display in Tent No. 3. Part of their exhibit comprises Begonias and Gloxinias, and they invariably set up their display in novel and pleasing fashion. This firm's strains of these two subjects are well known for their excellent quality, and they are beautifully exemplified in the exhibits made on the present occasion. Exhibitors generally might learn much from the novel methods of staging observed by this firm, in which the different subjects are seen at their best.

Messrs. James Carter and Co., Raynes Park, London, S.W., have set up Begonias in Tent No. 3, with many other interesting greenhouse plants. They represent a good strain, and are freely flowered.

Begonias as shown by Mr. A. H. Cole, 326, Camberwell New Road, S.E., are a pleasing feature. Good, free-flowering kinds are shown, which, together with Cannas, make an attractive display.

Mr. A. Donnithorne, Ashburton, Devon, has made an exhibit in which Begonias play an important part. They are represented by an interesting series of plants that show good culture.

In No. 1 Tent an exhibit of Begonias from Mr. W. S. Edwardson, Elsdon, Sidcup, calls for special notice. As an initial effort this display is quite good. Good culture and an interesting series of varieties and types all contribute to make the display highly meritorious. The plants are very fresh and clean.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, Middlesex, have a beautiful table group of double and single flowered Begonias, in which the former very largely preponderate. The plants exhibit high cultural skill, and embrace colours that are charmingly diverse. A few of the better doubles are Sir Garnet (fine deep crimson), King George V., Lady Cromer, Snowdrop (chaste white), Hon. Mrs. M. Glyn (rich orange terra-cotta) and Margaret Gwillim (yellow).

ORCHIDS.

Messrs. Flory and Black, Slough, are showing an immense bank of highly coloured Orchids. Cattleyas form the leading feature of the group, but the gem of the exhibit is seen in the magnificent little batch of *Disa Luna*. About four dozen plants are shown, all in the picture of health. This, however, is the most easily grown variety of the genus.

Messrs. Mansell and Hatcher, Rawdon, Leeds, are represented by a grand display of *Lælio-Cattleya* hybrids, *Odontoglossum crispum* (good white forms), *Aerides odoratum*, and some special *Odontoglossum* hybrids shown for the first time.

Mr. C. F. Waters, Balcombe, Sussex, is showing Cattleyas and Brasso-Cattleyas in variety, with handsome overarching sprays of *Odontoglossums* in the background.

Mr. Harry Dixon, Spencer's Park Nursery, Wandsworth Common, is showing various *Odontiodas*, pure white *Cattleya Mossiæ Wagneri*, and a beautiful form of *Odontioda Wilsonii*, which is admired by all lovers of Orchids.

Messrs. Charlesworth and Co., Hayward's Heath, are showing a smaller group than usual, but the quality is quite up to their usual high standard of excellence.

Sir Jeremiah Colman, Gatton Park, Reigate (gardener, Mr. Collier), sends a group magnificent in colouring and staged in a masterly way. Among the features of the group are Cattleyas *gigas* King Edward VII., *gaskelliana*, and William Murray; *Lælio-Cattleyas* *canhamiana alba* and *Phœbe*, *Thunia winniana*, also *Odontiodas* raised at Gatton Park, together with *Miltonia* hybrids, including an albino form.

Messrs. Sander and Sons, St. Albans, have a group unsurpassed in the splendour of its Cattleyas, *Miltonias*, *Dendrobium Dearei* and others. On either side of the group are large banks of the magnificent *Cattleya gigas sanderiana*, shown in exceptionally good form.

It is a real pleasure to see the intensely interesting group, in which *Vandas* and *Thunias* play an important part, shown by Lieutenant-Colonel Sir George Holford, Westonbirt, Tetbury, Gloucestershire. Large specimen plants of *Cattleya gigas* carry heavy trusses of magnificent flowers, and these, like all other specimen orchidaceous

plants from Westonbirt, reflect the greatest credit upon Mr. Alexander, the well-known grower.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, Middlesex, have a gorgeous display, in which the orange-scarlet *Renanthera imschootiana* is used with delightful effect among the white spikes of *Phalænopsids* and *Odontoglossums*.

Messrs. E. H. Davidson and Co., Twyford, have a miscellaneous group worthy of special note. Among the novelties may be observed *Cattleya Vulcan* × *C. aurea*, *Odontoglossum Aireworthi* Orchid Dene variety and *Odontoglossum eximium*. The *Phalænopsids* with their drooping inflorescences of white flowers make an imposing display.

SWEET PEAS.

Holland House Show may fairly claim to be the forerunner of the open-air-grown Sweet Pea displays each season, for while various early provincial shows and also the great Chelsea exhibition are notable for their displays, these for the most part are made up largely with flowers from under glass. The Holland House Show, however, sees the various specialists in strong force with outdoor-grown blooms, and on this occasion the exhibits are more numerous than usual, and, what is still more important, the quality is very fine.

Messrs. Sutton and Sons, Reading, make a feature of their black velvet shields backed by a grey screen, and the flowers are most artistically arranged in tubes and vases. A few of the most telling varieties are *Barbara*, *King Manoel*, *Mrs. C. W. Breadmore*, *Rosabelle*, *Doris Usher*, *Margaret Atlee* (a very fine cream pink) and *Scarlet Emperor*.

Messrs. Dobbie and Co., Edinburgh, as usual, are in strong force, and without any artistic embellishments they make a marvellous display. The flowers are of very high quality, size and colour being most telling. Upon tall pillars *Rosabelle*, *Lavender G. Herbert*, *Royal Purple*, *Thomas Stevenson*, &c., are shown, these blooms being ordinary field-grown; while in vases are gorgeous examples of *Margaret Atlee*, *Hercules*, *New Marquis*, *Red Star*, *Miss Ireland* (a new cream Picotee), *Frilled Pink*, *Dobbie's Orange*, *Lady Miller*, *Horatio* (a fine dark blue), *Dobbie's Cream* and *Alfred Watkins*.

After a lapse of several years Hobbies, Limited, Dereham, have blossomed forth as Sweet Pea specialists again, and they make an excellent display of high-class blooms. A most striking feature is the new *Mrs. Hugh Wormald*, a most striking bicolor with a soft salmon standard and cream wings, the latter having quite a frilled appearance. It is quite one of the best breaks yet shown, and reminds us of a *grandiflora* seedling we saw some years ago, but which failed to survive, the nearest to it being *Anglian Fairy*, although the latter is much paler. Messrs. Hobbies' exhibit is made up with archways and pillars at the back, while the foreground is filled in with grandly staged vases. Hobbies' *Cream*, *King Manoel*, *Money-maker*, *Edna May*, *King White*, Hobbies' *Salmon*, *Mrs. C. W. Breadmore*, *Thomas Stevenson*, *Miss Knyvet* (a soft rosy salmon) and *Scarlet Emperor* are a few other notable varieties.

Another fine exhibit is that of Messrs. Alex. Dickson and Sons, Newtownards. Archways with hanging vases are a feature. Arranged upon tiers beneath are vases of all the popular varieties and many new seedlings, including a most vivid orange scarlet. *Margaret Atlee*, *Hilary Christie*

(a pretty orange bicolor), *Melba*, *Hawthorn Rose*, *Illuminator*, *Blue Picotee*, *Melody* and *Orchid* are a few other varieties that stand out prominently.

Messrs. James Carter and Co., Raynes Park, make an effective display, the stand being backed and covered by neutral grey material. Among the most telling varieties are *Doris Usher*, *Mrs. Breadmore*, *Irish Belle*, *Lavender George Herbert*, *Red Star*, *Mrs. Cuthbertson*, *Charles Foster*, *Thomas Stevenson*, *Hercules*, *Rosabelle*, *King Manoel* and *Margaret Atlee*.

A very fine exhibit is set up by Mr. James Box, Lindfield. *Edna May Improved* and *King Mauve* are magnificent, while among others one notes *Mrs. Gibbs Box*, *James Box*, *Hercules*, *Orange Perfection*, *Ella Box* and *Dobbie's Cream*, the latter being remarkably deep in colour.

Some moderately good flowers are set up by the Rev. C. C. Chalmers Hunt, William Rectory, Letchworth. *Thomas Stevenson*, *Scarlet Emperor*, *Mrs. Cuthbertson* and *Mrs. Hardcastle Sykes* are very fair examples, considering the flowers were grown quite naturally without any disbudding whatever.

Messrs. G. Stark and Son, Ryburgh, set up quite a telling group upon the ground. Pillars break up the flatness while white trellis-work is used as a background. The flowers are merely field-grown, no disbudding being done, but they are, nevertheless, very good, especially *Lord Northcliffe*, *King Manoel*, *Helen Williams* and its white form, *Elsie Edwards* (a cream-ground bicolor), *Thomas Stevenson* and *Lady Miller*.

Messrs. J. K. King and Sons, Coggeshall, stage excellent blooms, but they are somewhat cramped for space. Among the many varieties shown we noted *May Campbell*, *Mrs. Breadmore*, *Crimson King*, *Margaret Atlee*, *King Manoel* and *Charles Foster*. The exhibit is divided in two portions, which makes it less effective than it would have been.

Messrs. E. W. King and Co., Coggeshall, set up an exhibit similar to that staged at York Gala.

VIOLAS.

Mr. Howard H. Crane, Woodview, Highgate, N., sets up a representative exhibit of *Violas* and *Violettas* and, considering the great heat of late, the blossoms are fresh and attractive. They are arranged in pans of wet sand, in which they keep very well. Excellent *Violas* are *A. S. Frater* (white, edged blue), *Mrs. B. Eric Smith* (a grand yellow), *Lingii*, *May*, *Moseley Perfection* (all good yellows), *Swan* (pure white), *Cygnets* (creamy white), *Daisy J. Wright* (splendid fancy), *Royal Purple*, *Royal Blue*, *W. H. Woodgate* and a host of other good things. The *Violettas*, so well adapted for the rock garden, are well shown, this grower having raised most of the recent acquisitions. Some that appeal to us are *Estelle* (minute white), *Rock Blue*, *Rock Lemon*, *Rock Orange*, *Mollie*, *Purity*, *Violetta*, *Eileen*, *Queenie*, *Bluebird*, *Sweetness* and *Vestal*. These are a few of the better of these dainty little sweet-scented flowers.

Violas, chiefly of the exhibition kinds, are well shown by Messrs. W. Seagrave and Co., Sheffield. This firm invariably show well, and their blooms, being grown further North, appear to suffer less from the weather than those of their Southern rivals. A careful look through this and other *Viola* exhibits is proof conclusive that great strides have been made in the development of this subject in recent years.

Mr. William Arkwright, Sutton Scarsdale, Chesterfield, has an exhibit of especial interest to lovers of the Viola. This gentleman has been working on definite lines in order to give the world something new and distinct in the way of colour, &c. We believe he hopes to get a good Viola of a crimson or kindred tone of colour, and his exhibit goes to prove the care he is taking in the development of this interesting subject.

Violas, among other subjects, are shown by Messrs. Carter Page and Co., London Wall, E.C. The flowers are well grown and represent a number of the better kinds in general cultivation.

As usual, Mr. John Forbes, Hawick, makes a display at the entrance to the show grounds. Among other hardy flowers, he shows a good list of Violas in well-known and interesting varieties. There are good selfs, fancy and edged sorts, and all combine to add materially to the value of this grower's display.

TREES AND SHRUBS.

Situated immediately to the left on entering the grounds is seen an extensive group of Japanese Maples shown by Messrs. W. Fromow and Son, Sutton Court Nurseries, Chiswick. The foliage is varied both in form and colour. The bronze-tinted *Acer laciniatum purpureum*, *sanguineum* and *septemlobum purpureum* are greatly in evidence, also a fine basket of *Acer versicolor*, with small crimson and variegated leaves.

From the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), comes a rare and interesting collection of new Chinese plants, including *Acer Henryi* and *Ailantus vilmoriniana*. Very few of the shrubs are flowering, although *Indigofera viciifolia* and one or two unnamed *Potentillas* are notable exceptions. This collection of little-known trees and shrubs makes a very imposing feature.

Mr. L. R. Russell, Richmond, is showing an interesting group of ornamental shrubs, with a Lily pool in the foreground. Among the shrubs will be noticed a great variety of standard and bush Ivies, Japanese Maples and the handsome *Dimorphanthus mandshuricus foliis argentea variegata*.

Judging by the large collections of clipped Yews and Boxes, it would seem that there is a revival of interest taken in the so-called topiarian art. The trees are shown clipped in all manner of fantastic, and in some instances grotesque, forms. Peacocks, balloons and spirals appear to be favoured designs. Clipped Yews and Boxes are shown by various firms, including Messrs. Cutbush, Highgate; Messrs. Piper of Bayswater; and Messrs. Cheal of Crawley.

Mr. G. Reuthe, Keston, has a group of rare shrubs, comprising *Rhododendrons*, *Crinodendrons*, *Celmisias* and a dwarf Beech from Antarctic regions.

A very choice collection of shrubs is shown by the Donard Nursery Company, Newcastle, County Down. The new forms of *Leptospermums*, *L. Boscawenii*, *L. Nichollii* and *L. Chapmannii*, form the chief features of the group. There is also an interesting collection of *Pittosporums*, including *eugenoides variegata*, while *Ozothamnus rosmarinifolius* is seen flowering with its accustomed freedom.

Messrs. John Waterer, Sons and Crisp, Limited, Bagshot, Surrey, are showing a variety of late *Rhododendrons*, also a grand display of *Kalmia latifolia* interspersed with standard Maples.

Messrs. Jackman, Woking, are showing Clematises in great variety. Some of the older varieties still hold their own, although there are delightful art shades among the newer sorts.

FRUIT AND VEGETABLES.

From Messrs. Ware, Feltham, comes a collection of pot fruit trees well laden with their luscious and highly coloured fruits, which look uncommonly tempting. Plums, Peaches, Nectarines and Figs are all included, there being a representative collection of each.

Messrs. Bucks, Tresco, Ipswich, once again demonstrate the wonderful fruiting qualities of their Tresco Tomato, which is undoubtedly prolific and one of the most interesting things in the show.

Messrs. Bunyard and Co., Maidstone, are showing fruit trees in pots, which reflect the highest credit upon the cultivation given them. Roses and herbaceous flowers are alike well shown by this well-known firm.

Pot fruit trees are shown by Messrs. J. Veitch and Sons, Chelsea, in the high standard of excellence that we have long learnt to associate with this firm. Peaches in standard fan-shaped trees, Plums as espalier and Apples as bush trees are all to be seen in the height of perfection and carrying heavy crops. Peaches Early Alfred, Peregrine, Hale's Early and Duke of York; Nectarines Early Rivers, Cardinal and Lord Napier; Plums Jefferson, Dennison's Superb, Oullin's Golden; Apples Lady Sudeley and James Grieve are chief among the varieties shown.

The Cherry trees in pots shown by Messrs. T. Rivers and Son, Sawbridgeworth, are worthy of special note by virtue of the heavy crops they carry. Black Tartarian, Frogmore Bigarreau and Bigarreau de Schreken are truly superb. Lady Sudeley Apple, handsomely coloured, is used with good effect in the foreground, while among the Peaches the crimson variety Peregrine is exceptionally fine.

The collection of vegetables shown by the Hon. Vicary Gibbs, Aldenham House, Elstree, reflects great credit upon Mr. E. Beckett, the able gardener. Backed by Globe Artichokes, Turnip-rooted Beet and Cauliflowers, there are exceptionally fine dishes of Peas Duke of Albany and Centenary (specially good), Beet Sutton's Globe, Carrots Favourite and New Red Intermediate, Vegetable Marrows Table Dainty, Moore's Cream and Perfection, Potatoes May Queen, King Edward and Gladiator, Tomatoes Perfection and Peach Blow.

Messrs. Laxton Brothers, Bedford, have a superb collection of Strawberries, all of large but even size. Among the pick of the varieties are Progress, The Bedford (very sweet and of Pineapple flavour), Reward, The Laxton and Givon's Late Prolific.

SUNDRIES.

The Chase Continuous Cloche Company, 11, Queen Victoria Street, E.C., are in full evidence, and if only a very small percentage of sunbeams are caught on this occasion, the temperature maintained by this system would be quite sufficient to cultivate even the tenderest tropical plants.

Visitors show a decided preference for Messrs. Castle's of Milbank, S.W., stand, where it is possible to rest and enjoy the ease and comfort provided by their most durable garden seats. Other suitable garden furniture of every description is on view.

Judging from the prevalence and devastations of the various insect pests in the garden during

the present year, there should be a great demand for insecticides of every description, and the stand displayed by Messrs. William Cooper and Nephews should prove of great assistance to amateurs visiting the show.

"Dryad" Cane Furniture suitable both for indoor and outdoor use is shown in great variety and in the most artistic and useful forms by the Dryad Works, St. Nicholas Street, Leicester.

The Folding Span Lights, which are arranged to show the utility of this invention as a means of raising early crops and protecting others, are shown to their best advantage by the Folding Span Light Company, Slough.

Spraying machines of the latest pattern and design which include all the improvements which modern science and practice can suggest, combined with garden syringes, sprinklers, pumps, &c., are prominently displayed by the Four Oaks Company, Sutton Coldfield, Birmingham.

The French Cloche Company, Caxton House Westminster, S.W., have a good selection of cloches, frames, and all other French garden requisites on view which are suitable for all gardens, from the smallest to the largest.

Messrs. Jeyes, Limited, Cannon Street, E.C., have also a selection of their well-known horticultural specialities on view, which have been proved most serviceable to all garden-lovers.

Messrs. Hartgen, 35, Noble Street, E.C., have a good selection of Holder sprayers on view, in various shapes and sizes, which can be adapted to all requirements for both large and small gardens.

Capturing the slug by means of the special slug trap designed by Mr. Vernon T. Hill, Mendip, offers great opportunities both to amateurs and others who suffer from the ravages of this pest.

Teakwood garden furniture, manufactured from battleships by Messrs. Hughes, Bolckow and Co., Limited, 10, Dover Street, W., and Blyth, is shown in various designs, including seats, tables, chairs, arches, &c.

A most interesting exhibit is that of Mr. H. Jones, Horscombe, Bath, who shows a good variety of designs in stone vases, balustrades and garden seats.

Messrs. Robinson Brothers, Limited, West Bromwich, have an ancient castle well fortified and equipped with weapons and ammunition which can be adapted by both amateur and professional horticulturists for the destruction of all insect and fungoid pests, and by the most dainty plant foods obtainable they are prepared to coax the best possible results even from plants which are most fastidious in taste.

To those who have an inclination to indulge in rock and flower gardening, Messrs. Thomson and Charman, 11, Adam Street, Adelphi, are prepared to render every possible assistance with plans and advice.

The falling off of horse traction and the increased number of motors has raised the question of less manure for the garden. To some this may be a serious one, but Messrs. Wakeley Brothers, Honduras Wharf, Bankside, S.E., are doing their level best to make up for the deficiency. Their patent Hop Manure is certainly the best substitute for stable manure at the present time, and is a most valuable plant food for both town and country.

* Owing to the demand on our space we are compelled to hold over until next week particulars of a number of exhibits at Holland House. For the same reason reports of the Sherborne Floral Fête and the Isle of Wight Rose Show are also deferred.

THE HELIANTHEMUMS OR SUN ROSES.

DURING June and July the various kinds of Helianthemums or Sun Roses are among the most beautiful plants in the rock garden, while they are also effective on dry banks and walls. Even outside the garden the common kind may often be found making very beautiful pictures, for it is wild in many parts of the country, and often forms, with short grass, the principal vegetation upon poor, thin soil overlying rocks on hill and mountain sides. In such places the rich golden flowers besprinkle the grass in much the same manner that the Buttercup does in moist meadows.

Under cultivation the common *H. vulgare* has undergone a considerable change, for not only does it appear as a taller and more compact plant than is usual in a state of Nature, but the colour of the flowers has changed to a remarkable extent; and whereas it is rare to find any other colour than the orthodox gold among wild plants, we find that under cultivation there are kinds with white, cream, pink, red, and copper coloured flowers. Some of these kinds are selected forms which have sported from the type, and others are hybrids between *H. vulgare* and closely allied British and Continental species. It is, however, easy to find how soon a selection of varieties may be procured if seeds are taken from a mixed collection and sown. Not only will there be a wide range of colour among the seedlings, but the strength of the plants will also show great variation. This also indicates how difficult it is to propagate and keep true even the most distinct forms from seeds; therefore cuttings must be relied upon not only for the increase of the garden hybrids and varieties, but also for closely allied species when the plants are growing in close proximity and the flowers are easily cross-fertilised by insects. Cuttings of short shoots taken during June or July, dibbled into pots of sandy soil and placed in a close frame, root quite well, and at the end of the first year form nice plants for permanent positions. They must, however, be kept in pots until they can be placed out permanently, for they transplant with difficulty. Moreover, small plants are preferable to large ones for positions where the soil is scarce, such as crevices between rocks in the rockery, or niches in loosely built walls.

An annual cutting over as soon as the flowers fade is attended by good results, for the untidy dead flower-stalks are thus removed and more room is made for young shoots. Helianthemums are often rather short-lived; therefore it is wise to destroy old plants which show signs of declining health, and commence again with good stock. Among the many kinds which may be procured,

the following species and varieties will be found desirable: *H. vulgare* and *H. glaucum* are closely allied plants, the latter differing from the former mainly in its greyish leaves; another plant which also has grey leaves, and is sometimes classed as a variety of *H. vulgare* and sometimes as a distinct species, being *H. croceum*. They hybridise very freely, and the many garden forms which are usually attributed to the common Sun Rose may with equal rights in many instances be classed with one or other of the other species. Good forms for general planting are album, with single white flowers, and album plenum, with double white blossoms; carminatum has red flowers and it also offers a double-flowered form; Fireball has bright red, semi-double flowers; cupreum



WHITE SUN ROSES ON A RETAINING WALL

has copper-coloured blossoms; while Magenta Queen has magenta blooms; Rose Queen, rose; roseum, rose; flore pleno, double yellow; venustum, scarlet; and rubens, orange-coloured flowers respectively.

H. polifolium is a distinct species, which is of looser habit and a taller plant than *H. vulgare*. Its leaves are greyish and rather narrow, while its flowers may be pink or white. *Rhodanthum*, a red-flowered plant, is sometimes claimed to be a variety of this.

H. alpestre and *H. vineale* are a couple of choice little plants, rather more tender than the commoner species. They should be given a sunny position on the rockery, where they will form pretty little tufts a few inches high and bear their bright yellow blossoms with great freedom.

H. umbellatum is a rather stiff, upright-habited bush from Southern Europe. It grows from 9 inches to 18 inches high and is recognised by its small, Rosemary-like leaves and upright racemes of white flowers. There is also a distinct group of Sun Roses composed of a few species, the best-known one of which is *H. formosum*. A native of Portugal, it forms a spreading bush 2 feet or more high, with greyish leaves and yellow flowers $1\frac{1}{2}$ inches across, which are peculiar by reason of the brownish blotch found at the base of each petal. It is quite hardy and an excellent kind to plant where it can be allowed plenty of room. Others of the same set and plants of rather similar habit are *H. alyssoides*, *H. halimifolium* and *H. ocyroides*. The first named has yellow, unblotched blossoms; while the other two have their golden flowers marked with brown. All four plants must be given a sunny position in order that the wood may become thoroughly ripened. They are sometimes mistaken for the allied genus *Cistus*, but are recognised as Helianthemums by the three-celled ovary.

CALCEOLARIA GOLDEN GLOW.

THE cultivation of the few known hardy Calceolarias has received an impetus since the production of the fine hybrid raised by Messrs. Veitch of Exeter called Golden Glow, and which is now fairly well known in the best gardens. It may be considered as generally hardy, and is one of the most ornamental flowers of its class in summer. One finds, however, that the species called *polyrhiza* is not too much cultivated, although by no means a rarity, and possessing a constitution of undoubted hardiness throughout at least the greater part of the British Isles. Its creeping growth renders it excellent for rapidly covering a good-sized space, where its neat leaves and quaint yellow flowers make a pleasing display.

It is not generally known that there are at least two forms of this Calceolaria; and as it is a plant which is widely distributed in its native home—

Chili—there are probably others yet to come under our notice. At present, however, we have two—one with considerably smaller flowers than the other, and also of lower stature and less vigorous in the growth of its leaves. As for their cultivation, these two forms of *C. polyrhiza* are very accommodating. Some recommend bog treatment, and they certainly thrive under such conditions, but they will also do well in a soil of a dry nature with plenty of stones among it, while I have never seen the larger form finer than in ordinary soil in a nursery border. This fine hardy Calceolaria is a gem for the rock garden, especially in places where it can be allowed to spread into generous masses, where its golden flowers will look so well in the light of a midsummer day

Dumfries.

S. ARNOTT.

THE BEST CACTI FOR THE GREENHOUSE.

AS stated by a writer in a recent number of THE GARDEN, it is a matter for surprise that one does not see more frequent mention of the different members of the Cacti family, as they have so many claims to recognition. The quaint and uncommon appearance of many of them constitutes one noteworthy feature; then, we have a great many whose ribs and spines are disposed with quite mathematical precision. Next, the blossoms of many of them are remarkably showy; and lastly, being so accustomed in a state of Nature to long periods of drought, one may take one's summer holiday without any danger of these succulents suffering from drought in the

care that they are well drained. A suitable compost will consist mainly of loam, lightened by a little broken brick rubble and sand. They may be watered moderately during the summer, provided always that the drainage is perfect; but in the winter very little water will be required.

Flowering Cacti.—A vast number may be included under this head, the blossoms of so many of them being very remarkable; but the term is more generally applied to the different forms of *Cereus* and *Phyllocacti*, whose blossoms are in many cases really gorgeous. These are more of a shrub-like nature, for the flattened branches attain a considerable size. It has often been a matter of surprise to me that the different *Phyllocacti* (the garden forms of which are almost innumerable) should not be more grown, for, though it may be urged against them that the blossoms do not long remain, yet in the case of

while the large creamy white blossoms of *Cooperi* afford a pleasing variety in colour.

Complaints are by no means infrequent that these *Phyllocacti* do not flower so freely as they ought to do, and when this is the case it is often caused by not exposing the plants sufficiently to the full sunshine. Of course, they may be shaded when in bloom, as the flowers then last longer; but at other times they should have the benefit of all the sunshine available. Should the plants need repotting, it is best carried out directly the blossoms are over. A mixture of two-thirds loam to one-third leaf-mould, brick rubble and sand will suit all the *Phyllocacti*. They are readily struck from portions of the branches taken during the early summer months, inserted into pots of sandy soil and placed on a sunny shelf. Care must be taken not to overwater.

Those two very nearly allied forms of *Epiphyllum*, namely, *E. Gærtneri* and *E. makoyanum*, that bloom in the spring and early summer months, claim recognition. They differ from the well-known *E. truncatum* both in their season of blooming and in the shape of their red blossoms, which are regular in appearance and suggest a small kind of *Cereus*. The style of growth is just like that of *E. truncatum*.

Many species of *Cereus* take up a considerable amount of room, but one species—*Cereus flagelliformis*, known popularly as the Rat's-tail Cactus—is a delightful basket plant. When suspended, the long, round shoots hang down for a considerable distance, and in the summer, when its bright rose-coloured blossoms are at their best, it forms a delightful feature.

The Night-flowering Cacti, of which *Cereus grandiflorus* is one of the best known, need a large structure and a fair amount of heat for their successful culture.

Of smaller-growing Cacti remarkable for their quaint shapes, peculiarly arranged spines and pretty flowers may be mentioned the various forms of *Echinocactus*, *Echinocereus*, *Echinopsis* and *Mammillaria*. Apart from the Cacti proper, various other succulents, such as some members of the genus

Agave, Aloe, Crassula, Echeveria, Gasteria, Haworthia and Mesembryanthemum, are well worthy of association with them. H. P.



PÆONIA LOBATA, A BEAUTIFUL SPECIES WITH TULIP-SHAPED FLOWERS.

meantime. It is, I know full well, often a source of worry to the owners of greenhouses to arrange for the plants being attended to during their absence from home, and the arrangements made do not always turn out satisfactory. With plants so indifferent to drought as cactaceous plants in general, the results are very different. Another purpose to which they may be put is for growing in a sunny window, under which conditions they are just at home.

Miniature Cacti.—These are a source of interest to many, and, as quite a representative collection may be kept in a limited space, a considerable number may be grown in a window. As sold the plants are in small ornamental pots, and they will keep in health therein for a very long time without being disturbed at the roots. In order to grow them on, however, they will in time need to be shifted into larger pots, taking

good healthy examples a succession is kept up for some time, and withal the plants are of easy culture. Cacti of this class do not withstand drought like those of a more globular shape; indeed, during the growing season the plants require to be moderately watered. The flowers of many of these *Phyllocacti* are quite startling in their tones of colour and the contrasts which occur in the same bloom. In some flowers the main portion of the bloom is of an orange, orange salmon or scarlet shade, shot in the centre with vivid tints of violet, blue or purple. These features, which cause a flower to appear of a different colour, according to the standpoint from which it is viewed, are in some cases quite startling. There are also many other coloured varieties, some of the pinks being very pleasing. Quite a small pink-flowered kind, whose blossoms are borne in great profusion, is *Phyllocactus phyllanthoides* German Empress,

So much attention has been paid in recent years to garden varieties of the Pæony that there is a tendency to overlook this beautiful species. *Pæonia lobata* is a charming plant with glorious coral pink flowers and clusters of golden anthers. The flowers are Tulip-shaped, and distinct from garden varieties in both colour and form. It has this year been admirably shown at Vincent Square by Mr. James Box of Hayward's Heath, who gained for it a certificate of merit from the National Hardy Plant Society. It is not a new plant, although seldom seen, and it is not every year that it flowers with the freedom experienced this season.

PÆONIA LOBATA.

GARDENING FOR BEGINNERS.

HOW TO BUD ROSES.



1.—A BUD REMOVED AND PREPARED FOR INSERTION.

wichuraiana type stocks 6 feet to 10 feet high are most useful when they can be procured. The stocks should be cut off at the required height previous to planting, which should be done before Christmas. In spring a goodly number of shoots may be expected to push out from the Briar stems. About four of those nearest the top should be retained, the remainder being rubbed off with the thumb and finger as soon as they show. A sharp knife is a necessity for budding, and plenty of raffia, cut into lengths of 12 inches to 15 inches, should be kept close at hand, fastened to the waist. The best buds, as a rule, are those on shoots which are flowering or have just recently flowered. Such a shoot is shown in Fig. 1. Select plump buds which show no signs of growing. Cut off the leaves as illustrated, leaving about an inch of the leaf-stalk. The next operation is to slice off the bud, starting with the knife half an inch above the bud. Make a downward cut and finish off half an inch below the bud. In Fig. 1 a bud is shown removed ready for insertion, with the cut surface exposed on the shoot from which it has been removed. Remove carefully with the point of the knife the small piece of wood at the back of the bud, so that only the bud and a shell of bark remain.

Preparing the Stocks.—Should dry weather prevail, ample water ought to be given the stocks some days before the budding operations are to commence; this will make the bark run much easier. To commence on the stock, cut away



2.—TYING IN THE BUD ON A STANDARD BRIAR STOCK.

OF the several methods employed in the propagation of the Rose, budding is the most important and extensively practised. Outdoors the best time to bud Roses is the second half of July and during August. While many amateur Rose-growers prefer to purchase vigorous young plants from a nursery, there are others who take a delight in propagating some at least of their own Rose trees.

There are several kinds of "stocks" employed for budding—the Dog Rose (*Rosa canina*) of our hedgerows in three forms, the standard, seedling Briar, and Briar cuttings. The Manetti stock, which was originally obtained from Italy, is propagated by cuttings; so also is the De la Grifferrae stock. The Japanese *Rosa rugosa* is also used both as a standard and dwarf stock, being readily raised from seeds and cuttings.

Standard Roses.—The standard Rose stocks are mostly obtained from the hedgerows in the autumn and early winter. Planted in the garden, they will be ready to bud towards the end of the following summer. The height of the standard varies according to the size and strength of the Briars and the requirements of the grower. They, as a rule, vary from 2 feet (half-standards) to 4 feet in height for Hybrid Perpetuals and Hybrid Teas, while for the lovely weeping standards of the



3.—A STANDARD ROSE TEN MONTHS AFTER BUDDING

all thorns near where the bud is to be inserted. This should be at the base or as near the base of the young shoot as convenient. One and a half inches to 2 inches from the base make a cross-cut through the bark about half an inch long, then a longitudinal cut from the cross-cut 1 inch long in the direction of the base of the shoot. Next, take one of the prepared buds, carefully lift the bark at the cross-cut, and slide in the bud, holding it by the piece of leaf-stalk. The bud should now be tied in firmly with raffia, as illustrated in Fig. 2. If there are three or four suitable shoots, they should be budded, as there is always the possibility of failure, especially if the operator is inexperienced, while, if four buds take, it will be quite easy to remove the weaker. In about four weeks examine the raffia, when, if the bud has taken, the raffia should be loosened and tied more loosely. Some controversy exists over the right time to shorten the growths which are budded. A section of growers cut off the ends of the shoots when preparing the wood for budding, but experience points to it being better to defer all the cutting until late autumn, say, about November, the Briars then being cut back to within 3 inches or a little more of the bud. Having been successful with the budding, the most important matter is to tie the young growths securely to thin stakes. Fig. 3 depicts the top of a standard Briar photographed at the end of May, ten months from budding. O. A.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Winter Tomatoes.—A sowing of some free-setting variety should be made at once in order to secure a supply of ripe Tomatoes in the winter. Sow the seeds thinly in pots or pans and place in gentle heat until the young plants are well through the surface, after which they should be raised to within a few inches of the roof glass, so that they may not become drawn. Pot into 3-inch pots as soon as large enough, and again into 6-inch pots as soon as ready. When the final potting takes place, the soil may consist of two-thirds turfy loam and the remainder of leaf-soil with a good sprinkling of bone-meal.

Early Vines.—Now that the Grapes have been cut, the Vines should be syringed daily during hot weather. The lateral growth may be allowed to run, but not to become overcrowded. Examine the border, and, if necessary, give a good soaking of liquid manure from the farmyard.

Peach Trees.—Early Peach trees from which the fruits have been gathered should be carefully thinned out. Remove all wood which is not required for next season's crop. If this work is carefully accomplished now, the wood which is left will receive the full benefit of the sun to prepare it for another year, and winter pruning will be a very simple matter. Keep the shoots tied into position, and syringe freely during the remainder of the season to keep the trees quite free from insects. If the borders are well drained, a liberal supply of water should be given at the roots, previous to which a sprinkling of artificial manure may be applied with advantage.

Plants Under Glass.

Malmaison Carnations.—Now is the time to propagate these favourite flowers by layering. The best method is to set a cold pit apart for the purpose. Let the pit be filled to within 15 inches of the glass with good sandy soil, and select clean, healthy plants from which to propagate the future stock. These old plants should be carefully turned out of the pots and planted in the new soil, spreading the growths evenly over the surface, so that when the work is finished the pit may be full of clean, healthy shoots. Use a very sharp knife and cut through a joint on the under side of the shoot. Cover with sandy soil and peg carefully down, making the soil moderately firm. Keep the pit closed for ten days and protect from sun. The foliage should be damped frequently with clear soft water. When growth commences, ventilate the pit to keep the young plants from becoming drawn.

Mignonette.—A sowing of some good variety for pot culture may be made now to furnish plants for late autumn flowering. If sown in 6-inch pots and placed in a cold frame until the seedlings are ready to thin, they will make useful plants by the beginning of November. Five or six plants will be sufficient for each pot.

Herbaceous Calceolarias may be sown now and placed in a cold frame or under a hand-light behind a north wall. The soil should be thoroughly moistened before the seeds are sown, and only a light covering of the seeds is necessary.

The Flower Garden.

Hollyhocks.—The plants will benefit by frequent waterings of liquid manure. Old plants with several spikes should be secured to a central stake, or the wind may soon ruin them. If dry weather sets in, a mulching of some kind should be placed over the roots, horse-manure for preference.

Lilies which are throwing up their flower-stems should also be supported with stakes, and water must be freely given for the remainder of the season.

Flower-Beds.—The plants are making rapid progress, and a weekly inspection of them will be necessary in order to keep them within bounds. This applies to carpet bedding plants more particularly, as if left for a longer period they present an over-trimmed appearance when the work has been finished. Keep the grass trimmed round the edges of the beds, and pass the lawn-mower over the grass at intervals of a few days.

The Rock Garden.

Early Flowering Plants.—Many of these will have formed seed-pods, and these should be

secured before the seeds drop. Seeds which are to be sown in spring may be placed in small paper bags and kept in a dry room until the time arrives for sowing.

Primulas, many of which are excellent subjects for sunny positions in the rock garden, should be planted well above the level of the surrounding soil, as they are liable to suffer from damp during the winter. Primula seeds should be sown directly they are ripe. Sow thinly in pans of sandy soil, and place in a cold frame until the seeds germinate. Pot into small pots as soon as large enough and protect from strong sun. Established plants may be divested of all decaying foliage, and the soil lightly stirred between the plants previous to top-dressing with light, sandy soil.

The Hardy Fruit Garden.

Strawberries.—No time should be lost in securing a sufficient number of healthy layers to make the early plantation for next season. Royal Sovereign is still one of the very best Strawberries for early or midseason supplies, and if healthy layers are placed in small pots now, they should be ready for planting about the middle of August. The border for this purpose should be trenched 2 feet deep, and a dressing of decayed farmyard manure mixed with the soil as the work proceeds. When the soil has become settled and the plants are ready, they may be carefully planted in rows 2 feet apart and 15 inches from plant to plant in the rows. Make firm and see that they receive sufficient moisture at the roots.

Peaches and Nectarines.—The final thinning of the fruits should take place at once. Trees in this district are carrying a heavy crop, and unless they receive attention at once, the quality of the crop will suffer in consequence.

The Kitchen Garden.

Lettuce.—A sowing of Lettuce seed may be made at intervals of ten days from now to the end of August. The situation should be shaded during the warmest part of the day. A border facing east will be a suitable place for them.

Endive may be sown now for use during the autumn, and a fortnight later for early winter supplies.

Celery.—The maincrop Celery should be planted without delay, watering the plants thoroughly as soon as they are placed in position.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Shallots.—In many cases these will have completed their growth and be ready for lifting; this, of course, must be determined by their appearance. Those that are ready should be pulled up and placed in a sunny position to ripen, turning them frequently so that every part will be exposed to the sun. Should, however, the weather be wet, they had better be put under glass in a cold frame.

Winter Onions.—These ought now to be ready for harvesting, and, should the weather be fine, no time must be lost in taking them up. It will scarcely be necessary to string these up as is done in the autumn, but at the same time they should be spread out in an open position, well exposed to the sun.

Tomatoes.—Those that were planted out some time ago against a south wall will now be making rapid growth, and, as the idea should be to ripen the fruit as early as possible, the plants ought to be restricted to one stem and have the point pinched out when a sufficient number of fruits have set. Should a supply of water not be at hand, the plants had better have a mulch of farmyard manure, which will assist the fruit to swell and preserve the moisture in the soil.

The Flower Garden.

Carnations.—Many of the earlier-flowering varieties are now coming into flower, and it is advisable to reduce the number of buds, particularly the larger-flowered sorts. Varieties of the King Arthur and Duchess of Rothesay type can be more severely dealt with, while the smaller-flowered sorts had better be allowed to grow

naturally. Those plants that had the flower-spikes removed to allow the plant to make grass for layering will soon be ready, and no time should be lost in getting this work done. It is, however, too early to layer the main batch.

Violets.—Runners must be removed as they appear, so that all the energies of the plant may go to building up the crown. A dusting of soot from time to time will greatly assist in keeping down red spider, and if this is applied while the foliage is damp it will be more effectual.

Thinning Annuals.—It will be as well to go over the various annuals and give them a final thinning. These thinnings, I find, make a grand display later in the season if planted in bold clumps or used for filling up vacant spots in the herbaceous borders. Previous to planting, dip the roots in a prepared puddle, and supply them with water until they take a hold.

Plants Under Glass.

Hydrangeas.—The present is a suitable time to secure cuttings of this useful greenhouse plant. If space permitted, it would be as well to place the cuttings in the propagating-pit to encourage quick rooting. Where specimens are required, pot on the strongest of the young plants now passing out of flower; these should be cut back and brought on slowly.

Fibrous-rooted Begonias.—All this type will now require potting on—at least, as soon as the roots appear at the sides of the pots. After potting, keep them in a fairly hot house, and pick off the flowers as they appear. Many recommend pinching the points out of the young plants of Gloire de Lorraine; this, however, I think, is a mistake, as the plants seem to make far finer specimens if allowed to grow naturally.

Mignonette in Pots.—In the colder districts Mignonette might be sown in pots now to flower in the early spring. To ensure that the young plants do not receive a check, it will be as well to sow in small pots, two or three seeds in each, and afterwards reduce the seedlings to one. It must, however, be understood that Mignonette will not stand coddling in any shape or form.

The Hardy Fruit Garden.

Wall Trees.—All wall trees will now be greatly benefited by liberal supplies of water at the roots, especially those on walls that have a projecting coping, as on such walls the trees are practically deprived of any moisture that may be falling. Where it is at all possible, the trees should be syringed late in the afternoon on fine days; this will be found to be very refreshing, and also tend to keep the foliage free from red spider. If summer pruning has not been commenced, no time should be lost in seeing to this very necessary operation.

Loganberries.—At the present moment these are throwing up a mass of young growths, which, if not thinned out, will seriously interfere with the swelling of the fruit and the proper ripening of the canes intended for next year's crop. Select a few of the strongest canes and tie them up loosely to the wires, and the remaining shoots should be cut clean away. Afterwards give the ground a good dressing of farmyard manure.

Fruits Under Glass.

Strawberries.—To secure well-ripened crowns for early forcing in the spring, a start should at once be made in securing suitable runners, and these ought to be taken from young fruiting plants. Place these in 3-inch pots filled with good loam, and stand them closely together to facilitate the work of watering. On no account allow the young plants to become dry at the roots, and pot them into their fruiting pots before they root through into the ground.

Late Vines.—The thinning of Grapes intended to be kept well into the spring should be carefully attended to; the centre of the bunch especially should be looked over several times and thinned out, as it is here that the Grapes suffer most from damping. Keep all laterals well pinched; at the same time allow a sufficient covering of the foliage to protect the bunches. As Lady Downe's is very subject to scalding, great care must be exercised in ventilating that house, particularly in the morning.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

AFFINITIES IN RELATION TO POLLINATION OF FRUIT TREES.

ONE often hears of a tree flowering most profusely that seldom bears a crop of fruit, and, on going deeper into the subject, it is apparent that the tree is self-sterile. Not far from Hereford a large Pear tree flowered well every season, but had no fruit on it for over six years. When, a few years ago, I advised the owner to tie a rabbit's skin to a pole, brushing it lightly over another variety of Pear, then gently touching the blooms of this fruitless tree, he carried out my instructions, and during the past two seasons, and owing to this process, he has obtained a bountiful crop, so prolific that it has induced a fruiterer from Hereford to run a dray sixteen miles to secure the fruit and pay the best price for it. Here one can see at a glance the value of planting an affinity near this tree, as it is evident this variety requires pollination distinctive. The varieties on observation for use in setting are Fertility, Comte de Lamy, Josephine de Malines, Glou Morceau and Louise Bonne de Jersey, these varieties being potent factors, and appear to pollinate the several other varieties surrounding them.

The Apple family is also, in most varieties, self-sterile, and in many orchards, especially where one variety has been planted in a block, pronounced sterile tendencies are shown. Therefore, to avoid this, one should plant those varieties we know on observation to be affinities. Recently I saw a glaring case of varieties being in proximity which proved a pollinator perfect, viz., Cox's Orange Pippin and Peasgood's Nonsuch, surrounded by several Warner's King, and in each case there was a splendid set of fruit; the same two varieties in the same orchard, but a considerable distance from the first-named, surrounded by Cox's Pomona, had scarcely a fruit on them. This proves conclusively that the variety Warner's King is the potent factor in the production. Within a few miles of Hereford there are some fine specimens of Blenheim Orange Apple trees, probably fifty years old, and until fourteen years ago a good crop was given, but latterly the return has been very small, and on information I found that a fine old specimen Crab (*Pyrus Malus*) had been uprooted by the elements, and since then the crop had always been scarce. Here we see the value of an indigenous variety to assist pollination, and a real asset, to my thinking, as no doubt the loss of the Crab Apple proved the reason of the failure; and one will have noticed that wherever the Crab Apple is in proximity to any variety of the Apple, so sure is there to be a crop.

Potent factors on observation appear to be Warner's King, Bramley's Seedling, Lord Derby, Worcester Pearmain and Bismarck; these undoubtedly would prove satisfactory if intermixed with every good variety in the proportion of about one to eight. Plums are exactly in the same category. In many orchards or plantations one will find sterile varieties, and the remedy is to graft or intermix with affinities. On close study one will find these in Monarch, Czar, Victoria and Prolific. These are sure fertilisers for most of the remaining varieties, but I advise, in the arrangement of the plantation, to plant in the proportion of one to six. I have several times advised planting Prolific near the varieties of the Gage family,

and in most cases have to record an unqualified success. In any case, never plant a block or quarter of any one variety unless intermingled with some of the sorts previously named, and it would also be wise never to plant any one sort, even if known to be self-fertile, as each and all are much more profitable if pollinated distinctively.

Now, a word as to the remedy in making these old trees fruitful in some of the old orchards. My advice is to head two branches on every fourth tree, one on the west, the other on the east side of the tree, and graft these with Warner's King and Bramley's Seedling—these two varieties have pronounced fertile properties—unless there are vacancies to plant young stocks of these varieties. But the grafting process is the quickest way to obtain maturity.

The pollen grains, no doubt, are carried, in a great measure, by the breezes, although I am convinced that insects have been in a large measure a great factor in bringing pollination to a successful issue. At the same time, I know of trees in orchards five to six miles from the nearest beehive, and yet an abundant crop has been taken from these trees in most seasons, and I contend it would be impossible in a mature orchard, say of ten acres, and trees in age varying from fifty to eighty years, for any insect to visit the entire crop of flowers, or even a small proportion of them, especially as experienced this season. Therefore, the zephyrs have the primary work to do, and it is a matter of serious consideration and interest to cultivators of hardy fruit to study these simple matters daily, and employ methods more encouraging than hitherto, as, commercially, the prospects are good and the demand great. GEORGE J. LOVELOCK.

THE EDITOR'S TABLE.

Buddleia Colvillei from Exeter.—Messrs. R. Veitch and Sons of the Royal Nurseries, Exeter, send sprays of this handsome shrub, also photographs showing the size of the specimen growing in their nurseries. Unfortunately, these were not suitable for reproduction. The flowers of this *Buddleia* are a sort of brick red in colour, and are produced in large, somewhat loose, pendulous panicles. It is a pity that their scent is not quite what we can term pleasing. Messrs. Veitch write as follows: "We are sending you herewith sprays of *Buddleia Colvillei*. The tree, of which we enclose photographs, was planted out in 1901, and now stands 16 feet in height, with a spread of 21 feet and carrying about three hundred trusses of its large pink blooms. It has never shown the slightest injury by frost, though one season we registered 21°."

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PÆONIES NOT FLOWERING (W. D.).—The most probable cause of the non-flowering of the Pæonies is the dry spring of 1913, which, militating against good growth, also prevented the formation of flowering crowns. All you can do now is to supply the plants liberally with water and liquid manure, though it would have been better had it been started two months ago. As the plants are healthy, they appear to be lacking in vigour.

TREATMENT FOR AQUATICS (Sagittaria).—You had better allow the water to trickle continuously into your Nymphaea tubs, or at any rate for several hours each day. Goldfish may be placed in the tubs if you like, but they will not be likely to keep the water clean. A constant supply of fresh water is what is most needed. The tubs should be cleaned out and the Water Lilies planted in new soil each year. March is a good time for the work. Be careful to remove decaying leaves and flowers regularly through the summer.

A SEEDLING VIOLA (R. W. D.).—The colour of your seedling *Viola* is very charming, and until quite recently there were no varieties in commerce equal to its beautiful light blue tone of colour. Two years ago, however, a rayless variety named W. H. Woodgate was introduced, and the blue colouring in this variety is practically identical with that of your seedling. The lines radiating from the centre of the bloom of your variety, in our opinion, detract from its value, and that is why we have a distinct preference for the variety we have named.

A RHODODENDRON FOR THE ROCK GARDEN (Teregram).—The specimen sent for identification is *Rhododendron indicum* var. *balsaminiflora*. It is a well-marked variety of the popular Indian Azalea, or Indian *Rhododendron* as it is correctly called, *R. indicum*, and has long been in cultivation. Both dwarfier and hardier than the type, it is an excellent plant for the rock garden or border in the warmer parts of the country, and even thrives fairly well in some parts of the Midlands. Mature plants are often no more than 12 inches high, but very bushy. As a rule, it blossoms freely from the time when it is but an inch or 2 inches high. Cuttings of half-ripe shoots root well in sandy peat in a close frame during summer, and good plants may be purchased from any of the nurserymen who make a speciality of hardy plants.

A SELECTION OF DAHLIAS AND VIOLAS (H. T.).—You will find the following Cactus and single Dahlias a useful lot for cutting: Cactus—Charles Woodbridge, Countess of Lonsdale, Lord Roberts, Loyalty, Lucius, Magnificent, Mrs. C. Gaze, Red Rover, Starfish, Up-to-date, William Jowett and Zephyr. Singles—Alice Seale, Beauty, Folly, Alice, Jeannette, Northern Star, Polly Eccles, Phyllis, Victoria, Miss Roberts, Mrs. Cannell and Mrs. Watson. Six showy and free-flowering Violas are Countess of Hopetoun, Countess of Kintore, White Duchess, Archie Grant, Primrose Dame and J. B. Riding. Six good Pansies will be found in Agnes Kay, Dr. Campbell, Leviathan, George Stewart, Lord Roberts and Miss Neil. It is not, however, worth while purchasing named varieties of Pansies unless they are required for a special purpose, as seedlings are now quite as good. Bone-meal, basic slag and kainit are suitable manures for your lawns and meadows.

VARIOUS QUESTIONS (Reader).—It is not usual for Soldanellas to flower a second time, and too frequently they refuse to flower at all. This year we have seen more than one instance of later flowers, though in all probability the crowns now flowering did not do so earlier in the year. You appear to have been very fortunate with your Sweet Peas, and the plants generally are doing well this season, particularly so those sown in September last on chalky loams and in good holding soils. The result, in some measure, may also be due to the conditions under which last year the seeds were grown, a bad or good growing and ripening season not unnaturally affecting the crops, as also the subsequent season's growth and development. Erythras are, as you say, deserving of more extended cultivation, though they are grown and appreciated in many gardens. You are also fortunate with your Tomatoes, as in some districts these have suffered from the late spring frosts.

AUBRIETIAS NOT FLOWERING (E. V. S.).—We might have formed a more correct opinion as to the failure had you given some particulars as to the position and cultivation generally. In the absence of these we can only presume that the plants are in too rich a soil, or in the shade with considerable moisture at hand. These plants are most prodigal in their flowering when growing in comparatively poor soil in full sun, as, e.g., ledges of rock or as edgings to pathways and like places. With these, firm planting is an important factor. If your plants are not in a fully exposed place, you should transfer them to such an one without delay and give them a poor soil into which old mortar, gravel, sand or broken sandstone enters freely. By pruning now to within 3 inches of the soil, the plants would break away again in a month, and may be replanted then if you can give the necessary attention to watering and shading till they are re-established. We are complying with your further request.

PROPAGATION OF DIANTHUS AND ONOSMA (A. O. S.).—The only practical method is by heel cuttings severed with a slight downward pull from the parent plant and inserted without more ado. Layering is impracticable, and, indeed, impossible of good results in the case of the *Onosma*, and cuttings made to a supposed "joint" have no possibility of rooting, owing to the peculiarity of the growth. On the other hand, heel cuttings in sandy soil in a cold frame in June will root readily. Hence your enquiry is in the nick of time. The *Dianthus* may be rooted from June to September by employing the same type of cutting in like circumstances. In this case a greater number of suitable cuttings will be produced if you suppress the flowering by the removal of the centre of the larger growths and wait for the coming of the lateral branches at their bases. Secure these cuttings when 2 inches or so in length. Do not use the knife to the *Onosma* in any circumstances. It is also bad for the *Dianthus*.

TREES AND SHRUBS.

CLEMATIS DISEASED (T. W.).—From what you say about your Clematis we imagine that it is suffering from a disease common to the garden forms of the genus. This disease causes apparently healthy plants to behave in the manner you describe, and they usually die within a few days. The best plan is to plant them where the sun will not strike the lower part of the stem, for although the upper branches like sun, the lower parts are easily injured by fierce sun-heat. Nothing can be done to improve your plant, we are afraid. Your Sweet Peas and Green Peas are apparently attacked by some disease, but we cannot say what disease or advise about them without seeing the plants.

SHRUBS AND CATERPILLARS (A. G. S.).—Your Clematis has evidently been attacked by caterpillars or some other insect pest, the damage being done and the caterpillars turned into chrysalides before you noticed the injury. Your newly planted shrubs are evidently suffering from drought; they should be kept well watered during dry weather until properly established. You may reduce the shoots by 9 inches or 12 inches at the present time, as the plants appear to be suffering from insufficient root action, though it is not absolutely necessary to prune such shrubs as you mention the first year after they are planted. A surface-dressing or mulch of well-rotted manure will do good by keeping the soil cool and moist.

STAPHYLEA BEARING DIFFERENT KINDS OF FLOWERS (E. W. N.).—The specimen sent for determination is not the typical *Staphylea colchica*. It is probably *S. Coulombieri*, which is a hybrid between *S. colchica* and *S. pinnata*. The smaller flowers are typical of *S. pinnata*, and the others of *S. colchica*. Although it is not usual for the hybrid to produce two kinds of flowers, a branch or two may have sported, or your plant of *S. colchica* may have been grafted upon *S. pinnata*, branches of the latter having grown from the stock and the bush bearing typical branches of two species. Had the two kinds of flowers appeared before, we should have imagined it to have been a grafted plant.

PRUNING SHRUBS (E. C.).—Two distinct kinds of shrubs are known by the name of *Syringa*. As a generic name it is applied to the Lilacs, and as a common name it is used in connection with the Philadelphuses or Mock Oranges. We presume that you refer to the latter shrubs, and if that is the case, you may shorten the long branches as soon as the flowers are over. As a rule, it is only usual to thin out the branches of the taller-growing kinds every three or four years; but those of low growth, the Lemoinei section, are improved by having the flowering wood cut away each year, leaving as many strong young shoots as possible. Should you refer to the Lilac, the long shoots may be shortened when the flowers are over, and the weak growths from the side of the plant should be removed. It is also wise to keep the base of the plant free from suckers.

TAKING CUTTINGS OF SHRUBS (Harry O.).—It is unlikely that you will be able to strike any of the plants you mention, except *Ceanothus*, out of doors or in your greenhouse, unless you possess a frame which can be kept close and shaded. You may then be able to root branch cuttings of *Pittosporums*, *Ceanothus* and *Choisya ternata* at the present time, and *Romneya Coulteri* in spring, by taking cuttings of the roots as thick as a lead pencil and 3 inches to 4 inches long, and inserting the pieces singly in small pots of sandy soil. You will probably do better by layering the lower branches of your shrubs in the borders where they stand. When rooted, the branches can be removed and treated as separate plants. If you order the *Viola* from any of the leading nurserymen who advertise

in THE GARDEN, you will be able to secure the number of plants you desire. It is not unusual for the Bottle-Brush Tree to bloom out of doors in the Isle of Wight.

AUSTRIAN PINE SHOOTS WILTING (J. S.).—The wilting of the Austrian Pine shoots appears to have been due to the presence of larvae of the Pine shoot moth (*Tortrix* or *Retinia buoliana*), but there were no larvae in the sections sent. Probably by a careful examination of the plants you will find the insect. All that can be done to prevent the spread of the disease is to remove and burn the affected shoots at once.

HYDRANGEA PANICULATA (H. T.).—This shrub does not thrive as a pot plant for any considerable length of time, and as it is quite hardy, you would do well to plant it out of doors at once in rich, loamy soil. The branches should be pruned well back each year. As a rule, the shoots formed the previous year are cut back to within two or three buds of the base in February. The flowers being borne on the current year's wood, all pruning may be accomplished while the plant is at rest. When the young shoots are about three inches long, thin them out, leaving but one or two of the stronger ones to each of the previous year's shoots. As it is a rank feeding plant, provide a surface-dressing of well-decayed manure each year after it has become established, and, after the buds appear, their development may be assisted by an occasional application of manure-water. It is only usual to flower plants once in pots, and then plant them out.

THE GREENHOUSE.

INJURY TO PELARGONIUMS (Druid).—The Pelargoniums are attacked by a fungus near the root, leading to the blackening of the stem. We advise you not to use old potting soil in future for potting on the plants—not, at least, until it has been stacked for some time, for it often harbours plant pests.

BRUGMANSIA LEAF ATTACKED BY RED SPIDER (G. Y.).—The Brugmansia is attacked by red spider, a pest that is probably attacking the *Salvia* too. The latter is too much dried up to enable us to be certain. You have probably permitted the house to become too dry, and so encouraged the red spider. A moist, buoyant atmosphere assists in keeping this pest in check, while a dry one encourages it. Fumigate on two occasions within four or five days.

TREATMENT OF ZONAL PELARGONIUMS (Zonals).—Zonal Pelargoniums such as those indicated by you, and which are now in 4½-inch pots, should, if potted into 6-inch pots, make good flowering plants for the spring and following summer. The main object should be to encourage a sturdy habit of growth, and in order to induce this the plants must have all the air possible; indeed, they may, during the summer, be stood on a firm bottom out of doors. The soil best adapted for Zonal Pelargoniums is good fibrous loam, lightened with a little leaf-mould or well-decayed manure and sand. The cuttings referred to by you should make a good succession to the larger plants.

CARNATION LEAVES DISEASED (F. C. C.).—The Carnation leaves sent are very badly infested with that troublesome disease known as Carnation spot. It is generally supposed to be brought on by damp, cold climatic conditions, from which one would be inclined to think that your house has been kept too close, and, consequently, the atmosphere is too moist for the welfare of the plants. If the ventilation of the house needs attention, this should be seen to at once, for a buoyant atmosphere with plenty of light is very essential to the successful culture of the Carnation. At present we should advise you to pick off all the leaves that are badly infested and syringe the plants with Veltha Emulsion according to the directions supplied with it.

PLANT FOR NAME AND TREATMENT (X. Y. Z.).—The leaf of the plant sent for determination is a species of *Eucharis*, apparently *E. grandiflora*, although the leaf is not the full size for that species. The plant should be grown in a tropical house with a minimum summer temperature of 60° to 65°, with a winter temperature 5° lower. It must never be allowed to become dry, as the leaves are evergreen in character. Frequent repotting must be avoided, as the bulbs dislike root disturbance; but manure-water may be given with advantage while young leaves are being formed. Keep the atmosphere of the house moist and syringe the leaves well twice a day, taking care to get the water beneath as well as on the upper surface. Do not allow insect pests to obtain a footing, and encourage growth by every possible means. As the bulbs acquire strength, flowers will be borne freely.

GREENHOUSE FLOWERS IN WINTER (A. M. G. B.).—There are a great many subjects that will flower during the winter in a greenhouse maintained at a temperature of 50° to 55°. Such plants will include Carnations, Zonal Pelargoniums, *Primula sinensis* in variety, *P. obconica* in various forms, *P. malacoides*, *P. kewensis*, *Cyclamens*, *Bouvardias*, *Cinerarias*, *Salvias* of sorts, the earlier-flowered *Azaleas* (particularly *Deutsche Perle*) and *Arum Lilies*. At the same time we wish to point out that it is too late now to commence the culture of any of these plants with the anticipation of their flowering in a satisfactory manner this winter. Most of them, however, can be obtained as small plants from many of the advertisers in THE GARDEN, and all that is needed is to shift them into larger pots and place them under conditions favourable to growth. If Roman Hyacinths are potted towards the end of August, they will in such a structure flower during the month of December, and much the same may be said of the Paper-white Narcissi. Freesias potted in August are a little later in blooming, but their deliciously fragrant blossoms are always appreciated. Such hardy

subjects as Solomon's Seal, *Dielytra spectabilis* and *Spiraea japonica* flower beautifully in the greenhouse during the winter and early spring months, thus anticipating by a considerable period their normal time of flowering out of doors. Of books such as you require, the following can be recommended: "The Amateur's Greenhouse," by T. W. Sanders, price 5s. 4d., and "Pictorial Greenhouse Management," by Walter P. Wright, price 1s. 9d.

ASPIDISTRA AS A TABLE PLANT (W. H.).—You can certainly, if you wish, show an *Aspidistra* as a table plant; but, however well grown, it would be a weak feature in a collection, as it is of too heavy a nature to compare favourably with the lighter and more elegant subjects that are available. Such plants as *Aralia Veitchii*, *A. filicifolia*, *Crotons* of the narrow-leaved section, many *Dracenas*, and such Palms as *Cocos weddelliana*, *Phoenix Roebelinii* and *Geonoma gracilis* are far more fitted for table decoration than the *Aspidistra*.

BEGONIA DISEASED (Somerset).—Your Begonia is badly attacked by that insidious insect known generally as the Begonia mite, although other plants are often affected by it. Its ravages are greatly on the increase, and, unfortunately, it frequently does a lot of irreparable mischief before its presence is detected. A mixture of soft soap and nicotine, in which the plants should be dipped, is one of the best remedies; but a single dipping will not suffice. On the principle that prevention is better than cure, the house in which the Begonias are grown should be occasionally vaporised with an approved vaporiser.

TREATMENT OF MANETTIA BICOLOR (W. H.).—From your description it would appear that the plant of *Manettia bicolor* has been too cold during the winter, with, perhaps, an excess of moisture at the roots. This *Manettia* succeeds best in what is usually referred to as a warm greenhouse; that is to say, a structure in which the winter temperature ranges from 50° to 65°. It will succeed in an ordinary potting compost of loam, leaf-mould and sand, and throughout the summer will do well in an ordinary greenhouse, or even out of doors. In your case we should be inclined to repot the plant, taking away as much of the old soil as possible without unduly distressing the roots. Then, if kept rather close and shaded, with an occasional syringing, it will, in all probability, start freely into growth.

CHRYSANTHEMUMS: PREMATURE BUD FORMATION (R. H. B.).—Some varieties show buds more persistently than others, and, furthermore, such bud formation is more prevalent in some years than in others. Cuttings taken from the old stems often bear buds too soon. With a few exceptions Nature asserts itself, and growth shoots instead of buds take the lead. Remove the points of the shoots bearing the buds two joints instead of one below such buds, as shoots are more likely to grow from the lower joints. The variety *Mary Poulton* is one of the worst offenders as regards premature bud formation, but the plants generally bear very beautiful flowers, notwithstanding.

ASPIDISTRA LEAVES TURNING YELLOW (A. J.).—It is quite impossible for us to tell the reason of your *Aspidistra* leaves turning yellow so soon after being repotted. It may be that you have allowed them to get too dry, and that might account for the trouble. Excess of moisture would be just as bad. One prominent point to bear in mind in the successful culture of *Aspidistras* is to remember that in a state of Nature they occur on the margins of forests and in similar positions. They are, therefore, essentially shade-lovers, although the mistake is frequently made of exposing them to full sunshine. You ask if you have got wrong soil. That is a question which we, of course, cannot answer; but full instructions were given in the article from which you quote. It may be, too, that when the plant was divided the roots were in a very bad condition, and if such was the case, the old leaves would be very likely to decay before the new roots were sufficiently developed to supply them with nourishment.

KITCHEN GARDEN.

RUST DISEASE ON CELERY (F. W.).—The best way to avoid the troublesome rust disease of Celery is to ensure that the seed sown is not infected with the fungus, as so much of it is. But, as a preventive, spraying the plants at intervals of about three weeks with Bordeaux mixture, commencing now, would be the best measure to adopt.

TOMATO SPOT DISEASE (Tomato).—The Tomatoes are attacked by the Tomato black spot fungus. This is encouraged (1) by too moist an atmosphere and (2) the too free use of manure. Pick off and burn the diseased fruits, lest the fungus spreads. Water the plants at weekly intervals with a solution of potassium sulphate (half an ounce to a gallon of water). Give ample ventilation.

LEAF-CURL IN TOMATOES (Unknown).—Specimens should always accompany questions when possible. Several different causes lead to curling of foliage, and without seeing the type of curl it is practically impossible to say what is its cause. The probable cause is either interference with the water supply or a sudden change of temperature. It may, however, be a hereditary trouble.

MALFORMED TOMATOES (J. R.).—No doubt one or other of the parent plants produced malformed fruits, and that would account for the malformed fruits you are getting. They are quite abnormal, and not of a form that could be attributed to the result of a cultural error. We have found the V.T.H. slug trap a good one for cockroaches and crickets; but where animals are not likely to get to the dead insects, phosphorous paste on bread is a useful poison.

THE GARDEN.

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JULY 11, 1914.

NOTES OF THE WEEK.

Mowing Lawns Without a Grass-Box.—There seems to be great diversity of opinion as to the use of the grass-box, particularly in hot, dry weather. While it is true that to mow without it on tennis or croquet lawns the grass would certainly interfere with the play, still, on large stretches of lawn inclined to get burnt up with the sun, there is much to be said for mowing without the box, as there can be no question that the plants derive great benefit from cut grass being left on the lawn.

A Useful Scarlet-flowered Border Plant.—What a free-flowering plant *Geum Mrs. Bradshaw* is! We have a large mass of it in our garden that has been in flower for many weeks, and still looks as well as ever with its large, semi-double, deep scarlet flowers. It is easily raised from seed, and seedlings come true, so that a good batch can be obtained quickly. The beautiful double white flowered *Peach-leaved Campanula*, *C. Moerheimii*, is also in bloom, and as the two are growing together, they form a pleasing contrast.

An Attractive Bramble.—*Rubus odoratus* is one of the most ornamental members of the Bramble family, forming a rather dense, erect growth. At the present time it is bearing its large, circular flowers of a pleasing purplish red tinge, and on healthy, developed specimens they will often continue to open till September. The large, sweet-scented leaves are broadly five-lobed and irregularly toothed, being very showy. It is an excellent plant for growing under the shade of trees, providing the soil is not too dry. There is a white variety which flowers earlier than the type, and is worthy of cultivation.

The Persian Rose.—What a remarkably fine piece of colouring is seen in this good old plant, its rich golden hue almost defying description! This notwithstanding and a fragrance which is also rich, the plant does not appear in every collection, even where the old favourites are admired to the full. We recently saw it against the house wall in the Rectory Garden, Clapham, near Worthing, and admired it for its richness of colour and free flowering. Because of these good attributes, and because, also, it has played a part in producing the modern yellow Roses, all who love beautiful colour in the Rose should add it to their collection if not already there.

The Pyramidal Rockfoil.—The variety of *Saxifraga Cotyledon* known as *pyramidalis* is one of the most beautiful, and, incidentally, one of the largest, of the alpine Rockfoils in cultivation. It is very robust, and sends out sprays from 2 feet to 4 feet long, bearing innumerable white flowers that are speckled with crimson. It grows best in fissures between rocks, where the long, arching



SAXIFRAGA COTYLEDON PYRAMIDALIS GROWING IN A FISSURE BETWEEN ROCKS.

sprays have plenty of room to develop. If the offsets are removed, larger specimen plants and stronger inflorescences may be obtained, but the rosettes do not, as a rule, attain flowering size in less than two years. It is said that this plant attains far greater proportions under cultivation than it does in its native rocks in the Pyrenees and other mountain ranges of Europe.

The Musk Rose.—This rambling Rose, *Rosa moschata*, is interesting and ornamental, and its scent is delicious. At the present time it is the most conspicuous of any of the species, with its large clusters of white flowers almost hiding the plant. To see it at its best it should be allowed to ramble freely, when it will often throw out shoots 10 feet long, which will form graceful arches of flowers the following year. In the Botanic Garden at Cambridge a large plant has rambled over a Pine tree some 50 feet high, almost hiding it with its clusters of flowers, which look well against the dark foliage of the Pine.

Spiræa Henryi.—One of the most beautiful shrubby *Spiræas* of recent introduction is *S. Henryi*. At the present time this is exceedingly pretty with its many corymbs of white flowers, which are borne most freely on the previous year's growth, forming beautiful arching sprays 5 feet to 6 feet long. Any pruning required should be done as soon as the flowering is over, and consists of thinning out the weak and old wood, the idea being to obtain long, uncrowded branches and to preserve a loose, open habit, so as to display the white corymbs of flower to the best advantage. It is said that the poorer natives of Hupeh, near Ichang (where this beautiful plant was first discovered), use the leaves of it as a substitute for tea.

The Fruit Crop in Oregon.—The Board of Agriculture and Fisheries are informed by His Majesty's Consul at Portland, Oregon, that the estimates of the probable Apple crop, which were made early in the season, seem to have been very much too large. Newtowns blossomed heavily, but a large quantity of the young fruit has dropped from the trees. Spitzenbergs did not bloom so profusely, but they have set better than the Newtowns. Arkansas Blacks have also dropped from the trees to a great extent,

and Winesaps are beginning to do the same. A great many Apples are showing slight discoloration on the stem, which will probably mean further heavy falls, and it will be nearly the time of the Apples going to market before an accurate estimate can be made. These conditions are the result of an early spring followed by cold, wind and rain, which did not prevent the fruit setting, but have caused it to fall afterward.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Tall Delphiniums.—It may interest others to know of the extraordinary growth of some of my Delphiniums. Two large clumps are over ten feet in height and have flower-spikes of 3 feet each, while the blooms themselves are very fine.—B. CHILD, *Ramleh, Walton-on-Thames.*

Sweet-smelling Rosaries.—In last week's issue, page 338, there is a query with regard to sweet-smelling rosaries. A friend of mine who has made them has written the enclosed. He says, however, that his experience is that they do not keep the smell. [Put the petals (any colour or kind) into a metal mortar, and grind them to a very fine paste. The action of the metal will turn the pulp black. If the pulp be not made in this way, it may be stirred with an iron spoon or rod until it blackens. A smooth surface to the beads is secured by very thorough pounding, and this process can scarcely be continued too long. The paste is then rolled with the hands into beads. As these shrink while drying, allowance for this must be made. A row of pins or fine wire nails are driven through a strip of wood, and on these the beads are stuck while drying. The drying process should be conducted slowly, or the beads may crack. They should look, when finished, as if made of very fine charcoal. It is usual to string them with a tiny bright metal bead, either gold or silver coloured, between the large ones].—A. L. KYNASTON.

Rose American Pillar.—With reference to your remarks on Rose American Pillar in your issue of July 4, page 337, I would like the members of the Rose Conference held at the Anglo-American Exposition, Shepherd's Bush, to have seen my specimen; and had they done so I do not think they would have omitted to note it as one of the most beautiful of the Roses which have come to us from the United States of America. I procured my plant from Messrs. H. Cannell and Co. when they introduced it a few years ago, and it has flourished exceedingly, sending up strong canes every season. I cut down the canes after flowering and train up the new growth to take their place. Last year I had nine new shoots, and this year I count over fifteen in good growth. The plant as it now is stands from 12 feet to 14 feet high, with a diameter of from 4 feet to 5 feet. The canes are trained up an iron post, round which is an old wire umbrella, cigar shape, and at the top they meet and hang over. The canes flower from near the ground all the way up and in great bunches. The Rose is a hardy one.—H. G. B., *Forest Hill, S.E.*

A Charming Iris Border.—At Hoddam, Dumfriesshire, the residence of Mr. Edward J. Brook, there was during June a magnificent display of *Iris pallida dalmatica*. It is planted by itself in a long, narrow border beside the extensive aviaries,

and presented a delightful appearance in the third week of that month. From a careful calculation, made by taking a short length of average bloom and multiplying it by the entire length of the border, after deducting a considerable number for errors, there must have been at least 4,000 blooms open at one time in this border. The flowers were of full size, and it can be realised by those who know this handsome Fleur-de-Lis how magnificent was the display afforded by this border. The plants have been in the same position for several years, and have been left without breaking them up. They have done better this year than ever before.—S. ARNOTT.

New Rambling Roses.—I do not think "Dane-croft," whose article appeared on page 317, issue June 20, can know *Neige d'Avril* or *Fraulein Octavia Hesse*, or he would not say "we have no good white in that section." The former was sent out, I think, in 1908, and is one of the

The colour is distinctly white. The blooms are useful for wreath-making, owing to their size, shape and purity of colour. Although not so densely clothed with flowers as some, it is a desirable climber.—E. M.

A Use for Bishop's Weed.—Mr. Smith's "chestnut" relating to Bishops and Bishop's Weed (page 327) is a very old one and has no facts to distinguish it from the merest fiction. *Ægopodium Podagraria*, the Bishop's Weed of modern times, was Goutwort, Ashweed and Herb Gerard of the old herbalists, and was valued, at least on the Continent, for its supposed efficacy as a specific in rheumatic gout. It is remarkable not only for having usurped the place of other herbs in the garden, but its present name of Bishop's Weed belonged to *Ammi majus*, an aromatic annual which is as easy to exterminate as it is difficult to get rid of the former. Gervase Markham, the authority on agriculture and allied subjects in the time of James I., mentions the latter as a veterinary medicine, Bullwort being one of the names he gives it. Gerarde, again, besides the common Bishop's Weed, describes Candy Bishop's Weed, which was a "most principal ingredient" in Venice treacle. This is *Cachrys sicula*, and *Sison perpusillum* is also included under the name. I was pleased recently to see Cow Parsley established in a prominent position in a well-kept English garden.—R. P. BROTHERSTON.

A Beautiful Australian Shrub (*Olearia stellulata*).—The genus *Olearia* furnishes our gardens with several very ornamental shrubby Composites. None of them, however, may be considered perfectly hardy, except *O. Haastii*. Other species, such as *O. macrodonta*, *O. myrsinoides*, *O. m. erubescens*, *O. nummularifolia* and a few more, may safely be grown out of doors if protection be afforded them during severe weather. *O. stellulata* (*O. gunniana*, *Botanical Magazine*, t. 4638), the subject of this note, is one of the most beautiful species of the genus, and the accompanying illustration is from a photograph of



OLEARIA STELLULATA IN THE CAMBRIDGE BOTANIC GARDEN.

finest pure white rambling Roses—flowering on June 20—that it is possible to see. I know of no variety to equal it in any way. The growth is vigorous. My plant is 10 feet high, with handsome, deep green leaves, which form a good base for its clusters of pure white blooms above. The trusses vary in number from five to twelve. The individual flowers measure 2 inches across, and with the deep yellow anthers are superb in appearance and deliciously fragrant. I do not know the origin of this Rose. It was sent to me for trial by Messrs. Bide and Son, Farnham, and right well it deserves to be more widely known. *Fraulein Octavia Hesse* belongs to the *wichuraiana* section, but is exceptionally early flowering for that type, being with me fully developed by the middle of June. Singly the flowers are fully 3 inches in diameter and much like those of *Kaiserin Augusta Victoria* when quite open, and although it produces a few smaller flowers on the same truss, it is not a cluster Rose like so many other sorts.

a plant growing in the Cambridge Botanic Garden. The shrub is 5 feet high and 4 feet in diameter, and is growing in a narrow border at the base of a wall. As will be seen from the illustration, the specimen is flowering profusely, forming a most striking object. The plant is about ten years old. The leaves of *O. stellulata* are alternate, five-eighths to seven-eighths of an inch long, oblanceolate or oblong-lanceolate, coarsely dentate, dark olive green above and densely clothed with stellate hairs upon the under surface. The flowers are borne in close panicles, and individually they are about half an inch in diameter and pure white. For many years seedlings have not, so far as is known, been raised, probably owing to the fact that members of the *Compositæ* are almost always self-sterile. Propagation may be effected by seeds, or by cuttings of half-ripened wood inserted in sand in the spring, keeping them close and shaded. *O. stellulata* is a native of Australia and Tasmania.—R. S. LYNCH.

The Value of Scent in the Rose.—Mr. P. L. Goddard, writing in your issue of June 27, page 329, states his opinion that scent in a Rose is "of much less merit than shapeliness." He sums up his case by saying that the one—the feast for the eyes—is an intellectual pleasure; the other—the feast for the nose—merely a sensual enjoyment. I think this is not a fair way of putting it. It is just as correct to say that the judgment of the eye with regard to a Rose is "a sensual enjoyment"; and surely no one who is competent to speak of it will deny that the beautiful scent of a flower may be "an intellectual pleasure," perhaps unsurpassed in refinement, and capable of appealing to the imagination with poetical suggestiveness. It is not too much to name it as the most ideal of all sensuous delights. Indeed, there is something of magic and romance about the scent of a flower which is as difficult to put into words as they say the rainbow is difficult to paint. I can quite understand anyone calling it the flower's soul, and the simile is beautiful and apt. Shapeliness may possibly require more "intellectual" examination to appraise it, if this is what Mr. Goddard wishes to urge; if it is so, may not this only mean that man can more readily perceive variety and complexity in shape than in scent?—and in this case neither complexity nor variety is in itself the test or the goal, but beauty. All value the Rose for its charm, and to many of us scent seems as great a part of its charm as shapeliness. May I refer to another point? It has probably occurred to Mr. Goddard, as it must have done to others, though I have not seen it discussed. Scent, using the word with the significance we give it when we apply it to the delightful odour of a flower, is, I think, a quality which distinguishes plants, or, let me say, the vegetable kingdom. Buildings, pictures, statues, men and women, animals (with, possibly, a rare exception) may or may not be beautiful to the eye, but they certainly have no "scent" in our present sense of that term. The fact that this delightful quality is confined to the vegetable kingdom makes one half inclined to say that it is a plant's particular glory. And, therefore, when any man "improves" a Rose at the expense of its scent, some of us are tempted to recall the instance of the careless spendthrift who recklessly throws away a good inheritance, perhaps without a thought. It is true that Shakespeare knew only a few old Roses like the Provence and the York and Lancaster, but this point of view emboldens me to believe that, were he now here among all our varieties of to-day, he would still prefer to say, if the florists would let him: "That which we call a Rose, by any other name would smell as sweet."—C. F. GRAY. [We quite agree with our correspondent that scent is a very desirable quality in a Rose. Frau Karl Druschki always reminds us of the Venus of Milo—a beautiful piece of statuary, but without "life."—ED.]

FORTHCOMING EVENTS.

July 14.—Royal Horticultural Society's Exhibition at Vincent Square, Westminster. Saltaire Show (2 days). Arboricultural Exhibition at Hawick (4 days).

July 16.—National Sweet Pea Society's Show at the Royal Horticultural Society's Hall, Westminster. National Rose Society's Show in Sydney Gardens, Bath. Birmingham Floral Fête (3 days).

July 17.—National Carnation and Picotee Society's Show at the Royal Horticultural Society's Hall, Westminster.

PLANNING AND PLANTING THE LITTLE GARDEN.

OUR competition for the best designs for planning and planting the little garden has created world-wide interest, and applications for the site plans have been received from nearly every part of the world. There is still time for new readers to enter, as the completed plans need not reach this office until September 1. We are offering cash prizes to a total value of £33 12s. and a number of book prizes for the best designs. Full particulars of the competition can be obtained by sending 1½d. in stamps to the Editor of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The coupon this week appears on page iii.

EXHIBITING SWEET PEAS.

HINTS FOR THE NOVICE.

THE increased interest in the cultivation of Sweet Peas has been brought about very largely by the competitive and trade exhibits at the various shows. This interest has again reacted, and we have larger and finer exhibits than ever we had, the competitive classes being in nearly every instance well contested. Those gaining premier awards have to place before the judges flowers that are almost perfect in form and colour, and well arranged, not only in the vases, but the various colours of the collection nicely blended or contrasted, so that the exhibit as a whole is pleasing to the eye. In addition to the cultivation of the flowers, there are several points that must be observed before such an exhibit can be put up. In the first place, the plants themselves must be kept most carefully tied in for some two or three weeks previous to the show, as, if allowed to become loose and hang about in any way, the fact of tying them in again will cause the flower-stems to be contorted, and with such material it is almost impossible to arrange the flowers in the vases as they should be.

Shading.—As every exhibitor knows, and as every would-be exhibitor should know, there are certain varieties which, to get them in the best possible condition, must be shaded. Under normal conditions most varieties will stand the sun well; in fact, the colour of many of them is considerably enhanced by it; but certain of the orange, pink, and salmon varieties must be shaded, and this is best done by straining very thin tiffany or Air Shading Material well above the flowers, so as to allow a free passage of air between the blooms and the tiffany, as very hot air takes the colour out of the bloom as quickly as strong sunshine. Commence to shade three or four days before the show. If put on too long beforehand, the stems are apt to become weak and the flowers thin and lacking in colour.

Feeding the Plants too heavily just previous to an exhibition is also inadvisable, though where the exhibitor wishes to exhibit at several shows one after another, say, in successive weeks, he naturally has to keep his plants up to concert pitch, and in such a case, if feeding is necessary, it should be given little and often rather than in heavy doses at longer intervals.

When to Leave Buds.—Where plants may have been rested or have not previously flowered, the buds should be allowed to develop for at least three weeks before the date of the show; and though they may, under

certain weather conditions, develop more quickly than this, such a contingency cannot be relied upon. It is certainly better to have a few blooms going over than not forward enough, and personally I am greatly in favour of allowing the plants to bloom some little time before a show, as, where the plants are not too exuberant, the flowers are much more likely to be of good quality, the individual blooms better placed on the stem, and to open much more nearly at one time. Each of these points is well worthy of consideration.

When to Cut the Blooms.—This is a point that many growers—amateurs in particular—are undecided about, and certainly it is one of much importance to the exhibitor. If the exhibition is near at home, most of the varieties may be left till the morning of the show, and the darker varieties will be improved thereby, as most of the crimson, scarlet, and even rose coloured varieties lose their brightness after a few hours in water, while in most instances the blue, lavender, and mauve varieties will improve in colour with anything from twelve to twenty-four hours in water. If the flowers have to travel some distance, they should always have three or four hours in water before packing. If given this treatment, they will easily stand twelve to fifteen hours in the boxes and come up fresh again, though an endeavour should always be made to get all flowers properly arranged in the vases two or three hours before judging commences, to allow the blooms to expand properly. One point should be rigidly observed, and that is, no matter when they are cut, they should be placed in a very light, airy position, thus avoiding any tendency on the part of any varieties to partially close. If the bunches are thinly disposed in vases or jam jars, they quickly dry, even if wet; and if the weather is very hot and dry, it will be found that they will grow considerably after being cut.

The Age of the Flower when cut is another consideration, and, naturally, one must be guided somewhat by the length of time it will be in water beforehand; but it is a mistake to cut the flowers too young. All the blooms, with the exception of the top one, should be nearly fully developed, with this latter about half open. In this condition the flower should be at its very best in a few hours. Bunches composed of blooms with the top flower or flowers not fully developed look weak, and certainly should not be credited with more points than those just on the turn.

Care in Packing is very necessary, especially if the blooms have to travel a distance; but when the flowers are dry and the stems have been in water an hour or two, this should not militate against the success of the exhibitor. Packed in shallow boxes, or, better still, shallow hampers, with a layer of soft tissue paper between the bunches, they will take no harm; though when the weather is very dry and hot, waxed paper should be used to prevent evaporation. On no account should two layers of bunches be placed one on top of the other. Some exhibitors send their blooms in water, and I cannot say anything against it except that I think it unnecessary when the above details have been observed.

On Arrival at the Show no time should be lost in getting the bunches into water, these being allotted to their various classes as they are unpacked. The exhibitor who takes all his flowers to the show (and I know more than one who does) and relies upon sorting them over there is only making a rod for his own back, it being much easier and quicker at home to select the blooms

and put them together for their various places than in the bustle of an exhibition tent.

Setting Up the Flowers is a tedious operation, but, with a few Rushes or strong grass in the vases, with a little practice one soon becomes expert, and as this is work that may be practised at home beforehand, there is no need for it to be slovenly done. Too spreading an arrangement is not nice, and detracts very much from the colour of the bunch; but at the same time the flowers should not be overcrowded, one bloom barely touching its neighbour. In this way the good and bad points may be easily seen. The arrangement of the colours, too, must be carefully done, placing the strongest and brightest colours where they will have the most effect on the exhibit as a whole, and not merely because as a bunch it contrasts well with its neighbours.

There may be many points that I have overlooked, but I think I have enumerated sufficient to put the exhibitor on the right track, and, providing his flowers are well grown, the novice, if he follows my advice, should be able to do himself justice, even if it is his first time out. **THOMAS STEVENSON.**

ROSE-GROWING IN TOWN GARDENS.

THE great bane of the town gardener—green fly—has been more prevalent than ever this season. The short spells of very hot weather which have been experienced have brought these pests out in alarming numbers, while the succeeding cold periods have checked the growths and rendered them less able to resist injury. One of the benefits arising from judicious pruning and—equally as important—the subsequent thinning out of spindly shoots, is that one suffers less from the plague of aphides, for it will be noticed that it is upon the weak growths they thrive most and are the more difficult to dislodge.

Those who have practised removing them by hand have been hard put to it, while spraying seems to have given only temporary relief. When the former method is employed, a good plan is to take round a basin of soapy water, into which the finger and thumb can be dipped before they are drawn up the growth. Not only is it much easier to remove them then, but it avoids soiling the hands, and the young shoots are less likely to be bruised and injured. When the insects congregate round the base of a bud, they are not difficult to remove, but more trouble is experienced when they are found between leaves that are just expanding. If the shoot is long enough, it can sometimes be dipped into the basin and thus cleansed; but otherwise, and if it is not

desired to spray, soapsuds placed on the growth will usually prove effective. After the blooms have started to expand, any green flies that get in should be removed with a small brush. Considerable care is needed in using a syringe at this stage. It is not advisable to indiscriminately spray Roses that are opening, for fear of soiling them, so that any spraying should be done at close quarters. It is always well when doing this to try to avoid ladybirds and their grubs—the latter small blackish insects with yellow spots on their backs. I do not think insecticides kill them, but they are likely to discourage them in their efforts, and they certainly deserve a better welcome,

under sides of the leaves only, leaving the upper tissue intact. This insect is of exactly the same colour as the leaf, and in its early stages is so tiny that it is very difficult to detect. The spoiled foliage shows where it is, however, and by turning over and examining all spotted leaves, further damage can be avoided from this source.

Even when the most careful spraying has been done, some mildew is certain to appear about this time. Frequently it may be found first upon the stem of a bud or flower, as these will naturally have been avoided to some extent. It is as well to have a small quantity of wash at hand for immediate use, for, by rubbing a little over the part affected, a great deal of future trouble may be saved. Leaves that are whitened should be removed and the tree sprayed thoroughly. **P. L. GODDARD.**

WORK AMONG THE ROSES.

ONE of the main points among Roses during this month is budding, but, as special notes appeared in last week's issue, page 345, it is left out here. A point that is not sufficiently borne in mind is the great help towards future growth and blossom that can be readily afforded if one pays more attention to the prompt removal of all old blooms and seed-pods. As these notes appear, the majority of our gorgeous blooming climbers and weepers will be carrying their main crop of blossom. Cut off the spent pods and trusses as soon as the petals have fallen. Too often this is neglected in the case of plants growing on walls and houses, also over large arbours and pergolas. It would not be so did more people realise the exhausting process of developing pods for seed. Naturally, the main strength of the plant goes here, and even the failure to ripen is a considerable strain. Not only is it wise to cut these off, but the flowered break itself might well be curtailed more than half its length upon all varieties of normal growth, and thus retain the plant in better shape and avoid so much tendency to bare bases, which cannot fail to be unsightly.

There is not enough attention given to a little judicious summer pruning in most gardens, and, wherever possible, as much as can be cut away of the wood that has already flowered should be done earlier, thus putting additional strength into the more valuable growths for next season's chief display. Almost all of our extra vigorous growers give their best from such young wood, and a few longer rods are of more use than a mass of crowded laterals, which would result in even less bloom eventually, as well as being far more difficult to manage or train in any desired direction. This younger growth can be kept cleaner and more



ROSE QUEEN OF FRAGRANCE, A NEW VARIETY THAT SECURED THE CUP OFFERED AT HOLLAND HOUSE SHOW FOR THE BEST SCENTED NEW ROSE. (See page 356.)

for each accounts for a good number of green flies in a day.

Those who can obtain rain-water should always use it in mixing insecticides. When hard water is used, they are not nearly as effective, and usually the lime is precipitated, so that a white deposit is left upon the surface of the leaves unless a thorough syringing with clear water is subsequently given. This is both unsightly and harmful to the foliage.

Of the many grubs which visit us at this time, one of the most difficult to catch is a caterpillar that commences life by eating tiny holes in the

healthy than older wood; in fact, quite a lot of diseased and deteriorating wood is avoided. The strongest growths that were pegged down may be cut away as soon as they have done flowering. This will allow of better working among them, as one can get around the stems more freely. By this time, too, most of this class of Rose will be making its strongest and most valuable breaks from the base, which always mature better when allowed to grow in a more natural and upright manner. With a little careful but efficient securing these can be cleansed easily, both as regards the soil and foliage. Hoed between, and a little mulch lightly forked in, do wonders in helping these growths.

After the first flush of growth and exhaustion of soil, almost all will benefit from free and copious waterings if the soil is at all upon the dry side. During a showery season a few sprinklings of artificial manures will be of great service, their feeding properties being washed down naturally and with less loss from exposure to a dry atmosphere. In almost all cases these manures are of more value when watered in or lightly forked into the soil, should rain be absent. Do not err in giving half waterings. It is surprising how much water it needs to properly penetrate to well-established roots, more especially in the case of vigorous growers upon walls, fences and arbours, which so seldom get enough to do real good. Little and often is not the correct plan here.

Because the bulk of our summer bloom is now over in most gardens containing the older varieties, there should be no check as regards persistent washing and the use of the hoe. It is from now onwards that so much mildew, red rust and black spot gains a firm hold for the autumn, and often ruins what would otherwise be quite as welcome a show as the first of the season.

Pot Plants from under glass will do better outside now if properly attended to. I fear there is much neglect at first with these, and they often suffer severely the first week or so after removal to the more drying influences of the open air. Water and attend to them with more care if you wish to get the best results from well-matured growth later on, and it is only from this that one can expect success when forcing. A. P.

ROSE PINK PEARL.

THIS I look upon as one of the best of the less rampant pillar Roses. The blooms are produced freely on rather short growths, and in the opening stages are extremely pretty, the colour being a delicate shade of buff pink. It was sent out a couple of years ago by Hobbies of Dereham, and was the result of a cross between Una and Irish Elegance. In growth and form of flower it takes after the first-named variety. If given liberal treatment, it soon makes a plant some 7 feet or 8 feet in height, and blooms over quite a long season. It is useful in a cut state for filling small vases for the dinner-table, its somewhat wiry habit of growth making it particularly suitable for light decorative schemes. THOMAS STEVENSON.

ALPINE PHLOXES.

THESE charming rock plants do not seed freely, but may easily be increased by cuttings during July and August. *P. subulata* and its varieties are well worth growing, and part of the old plants should be divided each season, for if allowed to become too dense they are apt to damp off during the winter.

THE DIANTHUSES OR PINKS.

(Continued from page 340.)

D. fimbriatus.—This may be commended for rougher rockwork or for the border. It grows about a foot high, and has good, fringed, pink flowers about June and July. It is of easy culture in light soil.

D. Fischeri.—This Dianthus is now less common than at one time. It does well in the border or on the rockery, and has grassy leaves and a number of blush or lilac fringed flowers. It is about nine inches high, flowers in the summer, and is easily cultivated in dry soil. *D. Fischeri* is now referred to *D. chinensis* as a variety of that species.

D. fragrans.—Although catalogued by some as about a foot high, it is often less. It makes nice clumps, with sweet-scented, white flowers,

would include among the hybrids *Rose de Mai* and *Progress*, with others of the newer race of perpetual-flowering Dianthus. *D. alpinus* × *superbus* is a new hybrid, and *D. Spencer Bickham* is a choice little crimson Dianthus for the moraine. *D. Atkinsonii* is a lovely double rose hybrid Pink.

D. integer.—This is a dwarf plant with white flowers, but I am doubtful if the true plant is offered, as that to be found in gardens has fringed blooms. In the "Kew Hand List" this plant is referred to *D. strictus*.

D. Knappii.—Uncommon, because one of the few Pinks with yellow flowers, *D. Knappii* deserves consideration, although its flowers are individually small. They are in clusters on stems 6 inches to 9 inches high. Easily raised from seeds and grows well, but apt to die off after flowering. May to July.

D. monspessulanus.—The Montpelier Pink grows 6 inches to 12 inches high, and has solitary, clear rosy pink flowers of fair size, but not specially



DIANTHUS SPENCER BICKHAM, ONE OF THE BEST HYBRID GARDEN PINKS.

and is highly pleasing in the summer. There is a double variety. Easily grown on the rockery. June and July.

D. gallicus.—A white-flowered species, rather greenish towards the centre, and solitary on stems about six inches high. An easy species in dry soil, flowering in late summer.

D. hybridus.—Under this name we have grouped a great variety of Dianthus. The most prominent of these, especially for the border, are generally known as the Mule Pinks. The greatest favourite of these is *Napoleon III.*, with blood crimson flowers, and splendid in the border. Like some of the other hybrids, it often flowers itself to death. If cut down immediately after flowering, this and other hybrids generally produce enough "grass" for propagating. Other good hybrid Pinks are *abbotsfordiana*, rosy scarlet; *Emile Pare*, rose; *Fettes Mount*, rosy pink; *Fürst Bismarck*, scarlet; *Lady Dixon*, cerise; *Marie Pare*, white; and *multiflorus*, rose. Some also

attractive, though useful on a large rockery. *D. alpestris* is now referred to this. There is a good white variety, *D. m. albus*. May and June.

D. petraeus.—A dainty, easily grown rock Pink with many small rose flowers. It is a capital plant for trailing over the rocks or a wall. The variety *albus*, white, is very pleasing, and there is a choice little double white variety worth growing. June.

Dumfries.

S. ARNOTT.

(To be continued.)

SUMMER PRUNING FRUIT TREES.

TREES and bushes should be gone over at short intervals, and on no account preserve shoots that would require to be removed in the autumn. This work can be done by pinching with the finger and thumb. A note should be made of all trees that have failed to fruit through over-luxuriant growth, so that they may be root-pruned in the autumn.

WORK AMONG BULBOUS PLANTS.

THAT there is much important work requiring to be done during the month of July in connection with bulbous-rooted subjects, no one gardening largely with these plants would attempt to gainsay. In some measure its importance lies in affording the plants (roots) a good rest after a season of toil. We have had their harvest of flowers, and should in like manner consider the bulb harvest if we would reap a further golden harvest next year. The "golden harvest," though it may apply directly to certain Daffodils, may also apply to others not "golden"; hence, figuratively, it may apply to all classes of bulbous flowers that may be dealt with now. It is only another way of saying that work of this kind should be done at the right time if the best results are to be desired.

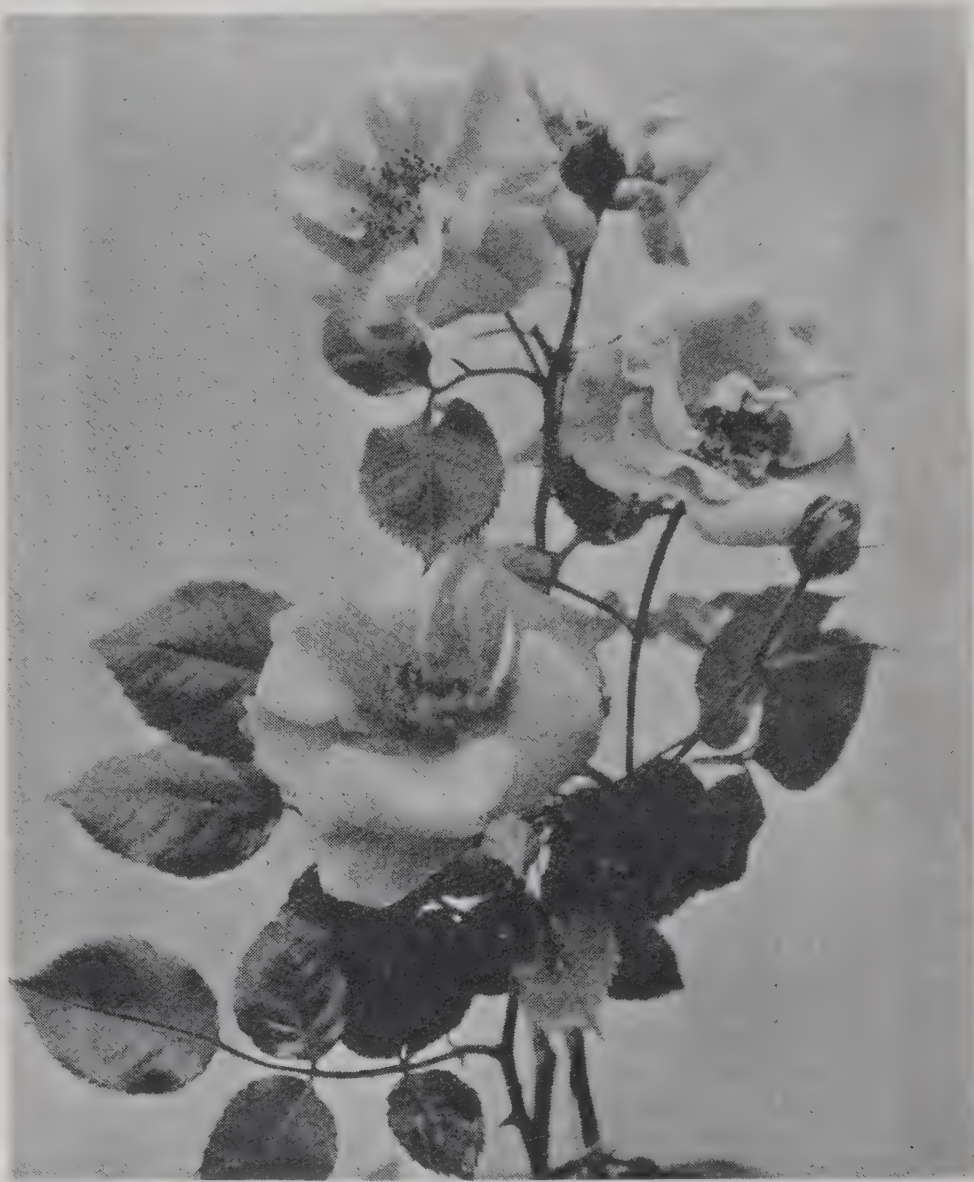
I say this much advisedly, since it is within one's knowledge that not a few classes of bulbous plants are left in the ground, and only thought of when planting-time comes round again. To lift them then—and, unfortunately, it is often done by many an amateur—is a most dangerous practice, and one which merits the strongest condemnation. The danger, of course, lies—in the case of the Daffodil, for example—in that re-rooting has already begun, in some considerably advanced, and, as the root-fibres of a Daffodil disturbed after once emitted from the bulb never retake to the soil, or, as in some other plants, break into root-fibres again laterally, the plant (bulb) is thrown on its own resources, and greatly exhausted by the processes of growth and flowering which follow. This naturally produces debility, and the worst results may ensue. Hence there is need for doing the work in season and in reason. With certain plants—Daffodils, Tulips, Spanish and English Irises and *Lilium candidum*, for example—that season is now.

It does not follow, however, that it is essential to success to lift all Daffodils each year. There are great differences of soil and of varieties, and the former exercises considerable influence on the latter. In cool, moist loams the Daffodil may go on and flower and increase for years, building up in that time a stature and vigour of its own. In lighter soils these things with refinement are best preserved and encouraged by annual lifting, by affording the plants a short though absolute out-of-ground rest, and by soil cultivation and enrichment. The commercial grower of these flowers of necessity lifts his crop of bulbs each year. It pays him to do it. He is equally smart and prompt about early replanting, for he knows that pays also. For the amateur, and for garden purposes generally, a modification of the annual lifting will be found to answer well. But where lifting has become

necessary, the amateur cannot err by indulging in early replanting. In other words, the choicest and most exacting of white-flowered Daffodils wants no more than a month's holiday each year, while some of the Poeticus race, because of their continuous rooting, are best without drying at all. The drawbacks to non-lifting of the Daffodil are overcrowding, bulb deterioration and sparse or non-flowering. To lay down hard-and-fast rules for all, having regard to varieties and varying soils and localities, is not possible. The amateur, however, who takes the above as the signs of the times, has already at his command a finger-post which will also prove an unerring guide. Crowded clumps of Daffodil bulbs will, with lifting and exposure to air—not sun—break up readily, while bulbs of the "breeder" or

house shelves; having seen them there prompts the warning. Such bulbs do not need to be roasted alive. In the dry state the Tulip is capable of much endurance, and loses but little in comparison with other bulbs.

English and Spanish Irises.—These are June flowers, and as they go to rest soon after flowering may be lifted almost at once, though any time during July will do quite well. These, like the Tulips, are spare rooting, and they pay for the rest, which also permits of the separating of the bulbils from the mother bulb for planting apart. Moreover, as among the most precious for service in the cut state, they merit encouragement, and should be grown by all. Among their good attributes are cheapness, simple cultural requirements and free increase. But there are other classes of bulbs, less well known, perhaps, of which something useful might be said in another chapter, which, with the Editor's permission, I will refer to anon. E. H. JENKINS.



A BEAUTIFUL PILLAR ROSE: PINK PEARL.
(See page 353.)

BROMPTON AND EAST LOTHIAN STOCKS.

THEIR ORIGIN AND CULTIVATION.

ALL Stocks are delightfully sweet, but none is so grand with sweetness of perfume as the old Brompton, which first appears by that name along with the "Twittenham" early in the eighteenth century. The plants attain a height of 3 feet to 5 feet, and it is a moot point whether the large double forms or the exceedingly floriferous singles are the more attractive; the latter I should say, certainly for picking. Very unfortunately, the plant is not so hardy as all of us would like, hence it is all but unknown in many parts of the country. One of the important cultural items never to be lost sight of is to manage the treatment so that the plants are enabled to withstand our winters and renew growth with vigour in early spring. Seeds should be sown at once, preferably in an ordinary cutting-box in light, friable soil, and protected

in a cold frame from sun and rain till the seed-leaves are fully formed, after which no protection is needed or appreciated. While still small, transplant in the reserve garden on a piece of ground fertile enough to cause a steady but not over-vigorous growth, and it will not be amiss to again transplant before autumn gives place to the damp and cold of winter, or from September 10 to September 20, so that they may have time to get over the check to root action previous to winter, but not to advance top growth.

In the Case of the Tulip, annual lifting is an essential, equally for the preservation of the bulb and for providing fine flowers, or, indeed, flowers at all. The Tulip is a meagre-rooting subject, and the few thin, wiry root-fibres it produces are annuals pure and simple; hence this highly popular and decorative plant should be lifted each year and rested long—certainly not less than two months, and with impunity three. After lifting, see to it that the bulbs are not exposed to strong sunlight or sun-heat. They are better, indeed, placed at once in shallow boxes in any airy shed or outhouse, or even a shady place where sun cannot reach them. Avoid putting such things on green-

About the middle of February the plants will be ready to appropriate surface-dressings of pigeon-manure, soot or artificials, or all of them, the ground to be well stirred at the same time, and, closer than 3 feet apart, that space should be

provided by lifting enough and planting elsewhere. A sheltered position, where sudden thaws after frost do not occur, and protection from cutting winds are very important. The single varieties are lovely for cutting in spring and early summer, but they foul the water in a very brief time, and it is essential that it be changed frequently and the stems of the Stocks washed at every renewal.

East Lothian Stocks were discovered in a farmer's garden in East Lothian by Mr. David Thomson, then of Archerfield, and by him brought to public notice shortly previous to 1860. Recently the colours have had several important accessions, and there has been also for many years a type with glaucous foliage called "wall-leaved," but it is not so effective, in my opinion, as those of the grey-leaved section. All Stocks are propagated from seeds saved from selected singles, and a large batch of singles ranged in colours at the base of the south or west walls of an old Scottish garden in April and May is a sight worth going a long way to see. But the flower-growing public want doubles, and so, when a few singles appear among the former with their Hyacinth-like spikes, the seedsman for a few moments comes in for a depreciatory sentence, for which, on the whole, there is no reason.

Some people sow the seeds of East Lothian Stocks in September and grow—or rather permit the plants to exist—in a cool, dry glass structure till spring, and then let them grow away. For ordinary purposes the end of January or the first week of February is quite soon enough to sow, the seedlings appearing in a few days when the seed-boxes are placed in warmth. But a cool, dry, airy treatment is best, the seedlings being apt to damp off otherwise. When damping is apparent, water must be applied with the utmost caution, dipping the boxes so that no moisture rises to the surface and wets it. Sand dried by heat in an oven and sprinkled among the seedlings is a certain remedy for this disease. If only a few plants are grown, they may be forwarded either in boxes or pots. I prefer transplanting into shallow soil beds in cold frames, from which they are ready early in May for planting into the flower-beds. They grow extremely rapidly when left longer in frames, and if it is inconvenient to plant till later, the lines between the plants should be pierced with an edging-iron to sever the roots.

A week or nine days should elapse between this root-pruning and planting, and the benefit is seen in the plants flagging scarcely at all. These Stocks do best in soil well enriched with rotted manure, made somewhat firm and not permitted to become dry in times of drought. The best of the plants, if lifted in autumn, are useful for the greenhouse in spring, but it is better to sow in April or May and grow these specially for pot culture.

Tynninghame, N.B.

R. P. BROTHERSTON.

SEASONABLE NOTES ON VEGETABLES.

Cabbage.—A sowing should be made the third week in July for the production of early spring Cabbage. Ellam's, Sutton's April and Flower of Spring are desirable varieties. The former, although it has long been in existence, is still reliable, producing perhaps fewer "bolters" than any other variety when the stock is true and the cultivation of the right order. What is wanted to ensure success is stocky plants, not too luxuriant nor drawn up weakly by overcrowding, which is the result of sowing the seed too thickly. An open site recently manured and deeply dug should be selected. If the soil is dry,

it is yet too early to apply the blanching material. Liberal treatment of Cardoons is a necessity to obtain large succulent plants. Copious supplies of liquid manure in trenches around the plants are what is required to enable the plants to make good progress. Should the weather continue dry during July, nightly syringings of the plants will be an advantage in stimulating growth.

Celery.—For late use make further plantings. Where space is not too plentiful, two and as many as three rows may be planted in the one trench, which is distinctly a saving of ground. The only point against this is the difficulty experienced in earthing-up the plants later on. With care this is easily done. Water regularly newly put out plants, and dust the leaves frequently with soot to ward off attacks of Celery fly.



A VIEW IN MESSRS. R. WALLACE AND CO.'S EXHIBIT OF JAPANESE IRISES AT HOLLAND HOUSE SHOW. THIS WAS AWARDED THE CORONATION CUP OFFERED FOR THE BEST EXHIBIT IN THE SHOW.

give it a thorough soaking the day before sowing the seed, break up the soil finely, rake the surface smoothly over and sow the seed thinly. It is better to have a larger bed than to sow thickly. Cover the seed with fine soil with which wood-ashes are added, as a preventive against the Turnip fly. If the weather continues dry, shade the bed with mats or green boughs until the plants show through the soil; then remove the shading and cover with a net to prevent birds taking the seedlings. Sprinkle the bed nightly to encourage rapid growth. Should the plants be too thick in the beds, remove a few directly they are large enough to handle, which can be transplanted to another bed, and thus give space to those retained, which are certain to be of the right kind for future use.

Cardoons when growing vigorously require support to prevent them falling on one side, as

Endive.—For autumn and winter supplies preparations should be made by making a sowing now. This will succeed on the top of a Celery ridge for economy of space. The next sowing should be made early in August on a warm border in a well-prepared bed of rich soil, as the plants from this sowing should be encouraged to grow quickly. Directly the plants are large enough to handle, they ought to be put out where they are to remain, as they transplant so much better than when larger. In thinning the rows, those remaining will naturally be the first ready for use. Keep the hoe going among them, especially during dry weather.

Leeks for exhibition should have every encouragement given them to grow freely. If they do not thrive at this stage, they cannot acquire the full size when show-time arrives. Liquid manure in quantity to the roots and overhead syringings

with clear water in the evening are an absolute necessity to obtain success. Blanching must continue, too, as growth progresses, to obtain the necessary 16 inches of clear stem which is considered to be an essential to success, and necessarily, of course, a due proportion in thickness. Stiff brown paper collars about six inches long are what are generally used. As the plants grow, others are added. Place a small stick as a support on each side of the plant with the paper over it. Plant out a batch on open, flat ground for general use. Use a dibber, making quite a deep hole. Leave it open, gradually filling in as growth progresses, thus procuring stems from 8 inches to 1 foot long, which for ordinary use are useful and obtained with but a minimum of labour expended. Deeply trenched ground, with abundance of manure added, is necessary for this mode of culture.

NEW PLANTS AT HOLLAND HOUSE SHOW.

FIRST-CLASS CERTIFICATE.

Hypericum Læve rubrum.—As shown this unique subject was 15 inches to 18 inches high, shrubby, like many of its class, the stems thickly beset with narrow, almost wire-like leaves of an inch or so in length, and terminated by clustered corymbs of somewhat starry flowers of flame red colour. Unique in its class, it is equally so in that delightful set of sub-shrubs that ever find a warm welcome in the rock garden. A neat and pretty habited plant of rare distinction and merit. From Messrs. Bees, Liverpool.

AWARDS OF MERIT.

Carnation Gordon Douglas.—A handsome self border variety of rare petal substance and rich

Amaranthus Dr. Martin.—The crown of central tuft of leaves is almost wholly scarlet, the lower leaves of similar tone in the basal half, and olive green and tinged with copper in the upper half. As a summer bedding plant it could be used with great effect. From Mr. W. E. Upjohn, Worsley Gardens, Manchester.

Sweet Pea The President.—A really good addition to those having brilliant orange scarlet flowers. Shown by Messrs. Alex. Dickson and Sons, Belfast and Newtownards.

Iris Mikado.—Virtually a Morning Mist—the most gorgeous of the water-loving Irises of Japan—done in white and rose, the former the groundwork, the latter the reticulations or veins in a particularly handsome flower. The standards, too, are prominent and broad, and coloured a reddish violet hue. From Messrs. Wallace and Co., Colchester.

Campanula garganica W. H. Paine.—A typical garganica in habit and freedom, with flowers of deep blue and a clear white base. These colours are nearly equally divided, the result being a very distinct and effective variety. Exhibited by Messrs. W. Watson and Sons, Dublin.

Gladiolus Mrs. Atkinson.—One of the early flowering race, the flowers of a pronounced salmon-pink hue. From Mr. C. B. Blamfield, Guernsey.

Carnation Chelsea.—A good novelty in the fancy section of the perpetual-flowering class. The ground colour is white, copiously striped with scarlet, particularly in the upper parts of the petals. The flower is of large size. Shown by Mr. A. F. Dutton, Iver, Bucks.

In addition to the foregoing Messrs. William Paul and Sons, Waltham Cross, were awarded the Clay Challenge Cup for a Rose not in commerce possessing the true old Rose scent. The cup is a silver-gilt one of the value of £75, and is open for competition annually. This year Messrs. Paul have won it with their new seedling Rose Queen of Fragrance, which is large, of rose pink colour and has exquisite perfume. See illustration on page 352. The vase of its flowers was greatly admired.



CARNATION GORDON DOUGLAS, A BEAUTIFUL NEW CRIMSON BORDER VARIETY.

Spinach.—A good batch of seed should now be sown in drills 16 inches apart to stand the winter, choosing an open site on deeply dug soil. That from which a crop of early Potatoes was taken will answer well. Either the round-seeded or prickly varieties will suffice. So many persons think the former is not sufficiently hardy for winter use. This is a mistake. One sort answers equally well with the other.

Parsley.—Now is a good time to sow seed for a batch of plants for winter and spring use. A raised edging to a path is a good site for this crop; it is so handy for picking during wet weather, especially where the soil is heavy and sticky. When the plants are large enough to handle, thin them out to 9 inches apart. Keep the soil well hoed to encourage freedom of growth.

Swanmore, Hants.

E. MOLYNEUX.

perfume. It is a glowing crimson scarlet. The flowers are of large size and peerless form. From Mr. James Douglas, Great Bookham.

Gladiolus Radiance.—This is one of the early flowering set, orange scarlet in colour, the three lower petals of crimson hue, with white flame or feather on each. Exhibited by Messrs. E. H. Wheadon and Sons, La Couture, Guernsey.

Rose Waltham Scarlet (H.T.).—A single perpetual-flowering bedding variety of much excellence. The plant is very free-flowering, and certainly most brilliant and effective in colour. From Messrs. William Paul and Son, Waltham Cross.

Sweet Pea Mrs. Hugh Wormald.—One of the most distinct of the new Sweet Peas of the present year. It is quite a break away, a bicolor of a distinct type. The standards are pink, the wings of a creamy tone. From Messrs. Hobbies, Limited, Dereham.

NEW ORCHIDS.

Three first-class certificates were awarded, viz.: *Cattleya Irene*, a white hybrid shown by J. Gutney Fowler, Esq.; *Miltonia vexillaria* illustris, from Messrs. Sander and Sons; and *Odontonia cleverleyana*, a remarkable bigeneric hybrid between *Miltonia* and *Odontoglossum*, from Messrs. Mansell and Hatcher.

Awards of merit were granted to the following: *Cattleya Warscewiczii Meteor*, from Lieutenant-Colonel Sir George Holford; *Odontoglossum eximium Solum*, from Messrs. Charlesworth and Co.; *Odontoglossum Invincible* and *Miltonia Sanderæ Enchantress*, from Messrs. Sander and Sons; *Lælio-Cattleya Aphrodite Our Queen*, shown by Messrs. Stuart Low and Co.; *Miltoniada vuystekeana insignis* (*Miltonia bleuana* × *Odontioda Charlesworthii*), from M. Firmin Lambeau, Brussels; and *Renanthera pulchella*, from M. A. A. Peters, Brussels.

GARDENING FOR BEGINNERS.

THE SUMMER PRUNING OF HARDY FRUIT TREES.



A.—NOS. 2 AND 2 SHOW POINTS AT WHICH SUMMER PRUNING SHOULD TAKE PLACE.

CULTIVATORS did not, a generation ago, attend to the summer pruning of their fruit trees as closely as they do now. One saw, in a few gardens, the young shoots partly broken

off and depending from the older branches; they were, in due course, cut away altogether. There are two reasons why shoots should not be left on the trees in a partly severed condition, namely, because they obstruct the air and light, and so prevent, to some extent, the ripening of the basal part of the branch, that part containing the buds which are to be retained for use in the following year; and because, being blown to and fro, they bruise the young fruits.

A Suitable Time to Prune.—If this work is done in June, the basal buds on the shoots that are shortened will, most probably, grow, and this condition would be disastrous to the welfare of the tree pruned. The middle of July is quite soon enough to begin the work, and it may be continued into the early part of August; in Northern Counties, to August 20. The ordinary pruning of the current year's shoots on young branches growing from two and three year old stems is shown in Fig. A. No. 1 shows a shoot duly cut back, and Nos. 2, 2, the points at which other shoots must be cut back. Fig. B shows how the cultivator should summer prune a young tree. The leading shoot, No. 1, need not be cut at all; the others, as denoted by the dark cross-lines, Nos. 2, 2, must be cut as shown. Any small shoots growing near the centre of the tree, and which, if left, would prove of little value to the cultivator and tend to cause undue crowding, should be cut out entirely, as denoted by the two cross-lines, No. 3.

Treatment after Pruning.—In the course of ten days or a little more, a robust tree will, after being pruned, begin to push out young shoots at the end of the pruned branch, as shown at No. 1 in Fig. C. All should be pinched out when about an inch long. In three weeks' time more young shoots will appear from the axils of the same main leaves; these young shoots will be weaker than the others, but must be pinched out too. After this date the wood of the tree begins to ripen rapidly, and no more shoots will grow to the extent that they will need removal before the winter pruning is done.

While the young shoots are growing at No. 1, the basal buds, No. 2, will be dormant and not grow; but they will continue to swell, and ripen later, forming plump buds.



B.—SUMMER PRUNING A YOUNG TREE.

The winter pruning means cutting the summer-pruned shoot back to No. 3. Shoots growing from old spurs must be dealt with in the same way.

On large stems of trees there are, very often, a number of young, long-jointed shoots growing, as shown at Nos. 4, 4. All such must be cut off quite close to the bark of the large branch, unless any of them are required to fill up large gaps in the tree.

G. G.

RAISING ZONAL PELARGONIUMS AND FUCHSIAS FROM SEEDS.

It is a very interesting occupation raising plants of the above from seeds. The resultant plants are,

usually, very strong-growing and quite suitable for greenhouses in town gardens. The flowers of Pelargoniums from seeds are perhaps not quite as refined as those on plants raised from cuttings, but if the plants are properly treated they yield a grand display of blossom in a comparatively short space of time.

Procure some shallow pans, put in crocks, then a few leaves. On the latter place a layer of nice gritty soil, rather more than three parts filling the pans with the compost. The latter must be made firm, and watered through a fine-roset watering-can. After the soil has drained for an hour, drop the seeds on the surface 1 inch apart; cover them with similar compost a quarter of an inch deep, and put the pans in a warm position in the greenhouse. Do not cover the pans with squares of glass or paper, but see that the soil is maintained in an even state of moisture. This can be ensured by holding the pans in water when necessary, and allowing the water to soak the soil upwards. It is advisable to sow the seeds thinly, because the resultant seedlings must be left undisturbed until they are about an inch high, as before they reach that stage they possess very few roots. Transplant them 2 inches apart in boxes 4 inches deep, filled with a good compost made moderately firm. Again afford the young plants the benefit of a light position in the greenhouse.

For the first potting use a compost of loam and leaf-soil in equal proportions, mixing with it some road grit or coarse sand, a small quantity of well-rotted manure and old mortar rubble. B.



C.—AFTER-EFFECTS OF SUMMER PRUNING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Melons.—The latest plantation of Melons may be made about the third week in July, and for the plants a gentle bottom-heat should be provided, so that the growth may reach the top of the trellis before the season is too far advanced. Keep surplus shoots well thinned out, and when the flowers are ready to pollinate, endeavour to secure three or four on each plant at the same time, so that the fruits may swell evenly and as quickly as possible.

Cucumbers.—Seeds for early winter supplies should be sown at once, and again a fortnight later. Sow the seeds singly in small pots, and, when the young plants are well through the surface, keep them near the roof glass, so that they may not become drawn.

Cherry Trees in Pots.—These trees may now be removed to the open garden, and should receive careful attention as to watering for the remainder of the season. Syringe freely, and if insects appear, Quassia Extract will be found a sure and safe remedy.

Plum Trees in Pots.—These should also be removed to the open as soon as the crop has been gathered. Plunge the pots in a bed of ashes in order to reduce the necessity of frequent watering. Manure-water from the farmyard may be applied frequently.

Plants Under Glass.

Chrysanthemums.—Late-struck plants which are intended for decorative purposes should now be potted into 6-inch pots. If two or three cuttings have been struck in each pot, they may be potted as they are, and if stopped about the end of July will make useful plants in the month of November.

Primula sinensis.—There is still time to sow seeds of *Primula sinensis*, and, if these are carefully grown, good plants may be available during the spring. If sown in finely sifted soil and placed in a cool pit, germination will soon take place. The pans should be covered with sheets of paper over the glass to keep the soil in a uniform state of moisture and to reduce the need for watering.

The Plant Stove.—Many of the spring-struck plants will benefit by a shift into larger pots. Aralias, Crotons and Dieffenbachias should never be allowed to become stunted while in a young state, or the colour of the foliage will be seriously affected. Strong heat and plenty of moisture will be necessary to promote free growth.

Gerbera Jamesonii.—Seeds of this beautiful flowering plant may be sown now in pots or pans of sandy peat. Place in gentle heat, and when the seedlings are large enough to handle they may be potted into peat and loam, with sufficient sand to keep the soil from becoming sour. They will flower about Easter.

The Shrubberies.

Pruning Plants.—Many of these in this department will now require attention either with the knife or the pruning secateurs, in order to keep them within bounds. Take care to cut the common sorts well back, so that the choicer varieties may have room to develop; but at the same time these choicer permanent subjects will benefit by judicious stopping, in order to maintain compact growth without interfering with their natural beauty. The ground between the plants should then be hoed and raked to give the place a tidy appearance. Spring-planted subjects should be examined and, if necessary, a good watering given.

Hedges of Box, Yew and Laurel may now be cut into shape, and where it is desirable to avoid a formal appearance, the pruning-knife should be used in preference to shears.

Ornamental Climbers.—A judicious thinning and regulating of the shoots should now take place, but care must be taken that none of the flowering branches is removed while this work is being done.

The Fruit Garden.

Late Strawberries.—Those on north borders should be well supplied with moisture at the roots while the fruits are swelling. The fruit

trusses may be lifted up and placed in small forked sticks. The bedding material should then be drawn close under the plants to prevent splashing by heavy rain. Waterloo is our best late variety at Frogmore, and fresh plantations are made each season, the best fruits being produced by plants of one year's growth. When the fruits are colouring, netting should be placed over the plants at some distance from the foliage, or the fruits will be pressed into the straw and very soon decay.

Plum Trees.—Those on walls and in the open garden should be frequently syringed in order to destroy aphids and other insect pests. Quassia Extract will be found a reliable insecticide if used according to the makers' directions.

Morello Cherries.—Trees should be carefully examined for the presence of black fly, which generally infest the tops of young shoots about this time. These may be freely syringed until the fruits approach the ripening stage.

Sweet Cherries.—The tops of the young shoots may be carefully dipped in some insecticide, which must never be allowed to reach the fruits.

The Kitchen Garden.

Late Peas.—The sticks should be placed in position as soon as the plants are a few inches high. Give a liberal supply of water at the roots and mulch the soil between the rows with manure from the farmyard. The same remarks apply to French Beans and Scarlet Runners.

Cabbage.—A small sowing should be made at once and the plants put out as soon as large enough. The ground for this purpose ought to be rich, but moderately firm. A sowing made early in August may be the most profitable, but with a mild winter the early sown plants come into use when other green vegetables are scarce.

French Beans.—The latest sowing in the open should take place at once. Choose a sheltered position for the purpose and sow the best early variety available. The Belfast Bean is sown here for this purpose, and gives great satisfaction. Plants from which supplies are being gathered should be freely watered during dry weather. Keep the pods picked off as soon as large enough, whether they are required or not, as this will encourage the plants to bear for a longer period.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Broccoli.—Where space is limited it is sometimes difficult to find room at the moment for this important crop. However, now that the early Potatoes will have been lifted, no time should be lost in getting them planted. This ground should not be dug or forked. All that is necessary is to clear off weeds and other rubbish, as the firmer the ground is kept, the more likely will the plants pull through a severe winter.

Savoys.—It will be as well to make another planting of these to follow those planted some time ago. In the case of Savoys, preference should be given to the small curled varieties, as these are not so likely to be damaged by frost as the larger ones.

Cabbage.—In cold districts where growth is not so rapid, a sowing should be made now of those intended for spring cutting. For this sowing I have found nothing to equal Harbinger and Sutton's April. This year we started cutting useful heads of the former during the last days of March, and out of a large plantation we did not have a single plant that bolted.

Winter Greens.—The planting of all winter vegetables ought to be completed without delay. Those planted earlier should have the soil drawn up round the stem, and to encourage growth give an occasional dressing of superphosphate and soot.

Lettuce and Spinach.—It will not be too late to make further sowings to keep up the succession of these indispensable vegetables. In doing so it will greatly assist the hastening of the growth if the seed is sown thinly, and, again, if the young plants are thinned as soon as they can be handled.

The Flower Garden.

Pansies and Violas.—Where these are grown from seed, the present will be a suitable time to make a sowing. In many cases this sowing could be made in the open border; still, to avoid all risk of failure from various causes, it will perhaps be better to be done in boxes and cover with a piece of glass. Guard against thick sowing, as I find they are very liable to damp off in the seedling stage; besides, they do not make the same sturdy plants as those sown thinly. When they are large enough to handle, they may be pricked out into a warm border, or, better still, into an old frame, where they will make nice plants for putting out in the spring.

Daffodils.—Where it is intended to divide and replant these, they should now be ready for lifting; indeed, sometimes this work is delayed much too long, as no sooner does the foliage die down than they commence to grow again. Lift the bulbs and select the largest and best for planting, while the small offsets are in many cases not worth troubling about. Store these in a cool, dry shed until they can be replanted, which work should not be unduly prolonged.

Syringas.—Like many other flowering shrubs, these have bloomed most profusely this season; in fact, I do not remember having seen a better display than we had this year. After flowering they should be well thinned out, cutting away all weak and exhausted wood and retaining only strong, healthy shoots. If this work has not been practised hitherto, it will be interesting to note the difference between those treated in this way and those left untouched.

Sweet Peas.—These will now be flowering freely, and to keep them in that state they will require almost daily attention. The old blooms should be cut off, and on no account allow seed-pods to develop, as the ripening of only a few would very soon put a stop to flowering. If liquid manure from the farmyard cannot be procured, give a slight dressing of some approved artificial manure. Afterwards give the plants a good soaking of water.

Plants Under Glass.

Salvia splendens.—Plants rooted fairly early will now be ready for shifting into their flowering pots, and as they are rather strong-growing subjects, the compost should be fairly rich. The size of the pot must be determined by the size of the plants and the use to which they are intended to be employed, but very good specimens can be had in 8-inch or 9-inch pots.

Caladium Argyrites.—As a decorative plant this little gem would be hard to beat in any collection, and yet it seems strange that it is not so much in evidence as it used to be. Although it is by no means difficult to cultivate, the trouble seems to be some neglect during the ripening period. Plants that were started early will now be losing their foliage, and should be dried off very gradually. Place them under the stage in the plant-house and water occasionally.

The Hardy Fruit Garden.

Gooseberries.—In order to prolong the season of this delicious fruit, and at the same time increase the size of the berries, give the bushes a good soaking of liquid manure. In gathering the fruit for preserving, thin out the berries of those varieties intended for late keeping, leaving only a moderate crop on each bush, and it is really surprising what good results can be had from this practice.

Newly Grafted Trees.—The binding should now be removed if this has not already been seen to, and the heads supported for a time, as, if left unprotected, serious damage may be done by strong winds and thunderstorms.

Fruits Under Glass.

Peaches.—Where the fruit has been gathered, the trees should be gone over and judiciously thinned, and the young fruiting wood fully exposed to the sun and light. Keep the foliage clean by syringing morning and evening, and give the border a good soaking. Later varieties should be kept moving, particularly Barrington and Bellegarde, as, if the season should prove cold and sunless, they never finish satisfactorily.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

ROSE GARDEN.

STOCKS FOR ROSES (*Cap Hayward*).—Most Rose-growers avoid using Sweet Briars as stocks, although we once knew of a grower who preferred them. We think we should try to have them exchanged for the ordinary *Rosa canina*.

ROSES WITH BLIND SHOOTS (*T. Ward*).—Some varieties have a tendency to produce blind or flowerless shoots, but often it is the fault of pruning, and frequently it results from damage caused by a very tiny black maggot. The best plan is to prune back the shoots to good plump eyes as soon as you are certain they are flowerless, and in your case you cannot do it too soon.

FRUIT GARDEN.

BLACK CURRANT LEAVES FOR INSPECTION (*Miss J. R.*).—The Currant appears to be attacked by the fungus *Gloeosporium Ribesii*. Spray, as soon as the fruit is picked, with sulphide of potassium, 1oz. to three gallons of water.

PEAR LEAVES FALLING (*W. F. M. C.*).—So far as we are able to see, there is no fungus present to account for the fall of the Pear leaves, and the appearance of the leaves suggests that the plant is placed where cold winds reach it. This variety is apt to suffer from cold winds, as it has long petioles, which enable the leaves to damage one another.

YOUNG FIGS GROWN IN POTS TURNING RED (*R. A. A.*).—Both the samples of fruit and foliage of the Figs sent are badly infested with red spider, and this, no doubt, is the cause of the trouble. Fumigate with Richards' XL All Insecticide until you get rid of them, and be on the look-out for them early next year, killing them before they do any mischief.

A CURIOUS NECTARINE (*Swansea*).—It is not quite certain what has caused the curiously irregular development of the Nectarine fruit you send, but cold may have done so. It is possible that puncturing by one of the leaf hoppers (insects allied to the Apple psylla and aphides) may have been the cause, or even aphides themselves. There appears to be no suspicion of fungus, disease, or bacterial trouble, such as gumming, on the fruit.

PEAR SCAB (*South Hants*).—The little Pears are attacked by the fungus *Fusicladium pyrinum*, which causes Pear scab disease and the cracking of the fruits. The trees should be sprayed immediately with Bordeaux mixture, at half the strength used for spraying Potatoes. The trees should be carefully pruned next winter, so as to remove all the shoots that show any sign of cracking of the bark or dying back, for it is in these shoots that the fungus passes the winter.

THE GOOSEBERRY RUST (*A. R.*).—The Gooseberry is attacked by the fungus *Puccinia pringshermiana*, the Gooseberry rust. This disease is not often very troublesome, and is not perennial in the bushes. Prompt removal and burning of all the affected leaves, fruits and shoots would probably partly or quite stop the disease. The fungus passes from the Gooseberry to the Sedge, on which it produces brown rust spots, and if it is desired to completely stamp out the disease, the most effective way would be to destroy all the Sedges in the neighbourhood.

CHERRIES FALLING (*Mrs. W.*).—The falling of the Cherries is not due in any way to lack of fertilisation, but probably to some interference with the water supply, although it may be the result of imperfect ripening of the wood last year. No doubt the splitting of the Nectarine stones and fruits is due to "gumming," a disease brought about by the attack of bacteria on vigorous growth. It would be well to cut out the branches showing gumming, and to paint the cut ends with white paint.

KITCHEN GARDEN.

CUCUMBERS UNDER GLASS (*X. Y. Z.*).—You do not say how old your plants are. If they are young and just coming into bearing, we should cut away the fruit on the main stem before it is full grown. But if the plants have been bearing some time, it does not matter. In Cucumber-growing the principle to go on is to stop each new shoot two leaves above the fruit, whether it is a

lateral or sublateral. Sometimes laterals (or new shoots) are blind and do not show fruit. These should be stopped at the fifth or sixth leaf, and most likely the second growth or sublateral will produce a fruit.

MISCELLANEOUS.

QUEEN WASPS (*Kircassock*).—Yes; all the wasps are queens. Drones and workers die in the late autumn or early winter, and only queens survive to start new colonies. Queen wasps have been remarkably abundant this year.

FORMALDEHYDE (*Quant. Suff.*).—The weakest solution of formaldehyde which may be expected to destroy green fly is 5 per cent. (1 part to 200 of water), but even that is likely to injure shoots and foliage of herbaceous plants. On the other hand, some plants, such as *Choisya* and other leathery-leaved plants, do not appear to be damaged even by a 2 per cent. solution.

ABOUT A BOWLING GREEN (*J. W. S.*).—It is not generally advisable to sow a bowling green with grass seed, far better results being secured by laying turf, which should be strong, composed of fine growing grasses and free from weeds. A green laid with such turf can be played on after a few months, but a green produced by sowing seeds ought not to be used for at least two years, for the grass under that time will not be vigorous enough to stand the hard wear. The grass can be improved by giving a dressing of bone-meal and soot at the present time; then, in autumn, sow 3lb. of basic slag and 1lb. of kainit to the rod. Do not apply a weed-killer while the grass is so young, but carefully hand-weed the green. For killing weeds upon paths it is advisable to procure a ready-mixed preparation from a seedsman. Several of such preparations are upon the market, all of which are good.

COLEUS AND PEACH LEAVES FOR INSPECTION (*Anxious*).—The Coleus is badly attacked by the root eelworm (*Heterodera radicola*). This pest attacks all sorts of greenhouse plants, and some outdoor ones as well. The soil in which plants attacked are growing should be burnt, the crocks destroyed, the pots thoroughly washed in boiling water, all soil from the potting-bench and the like being destroyed thoroughly. No precaution that can be taken should be omitted, for no pest is more troublesome to eradicate, and none is more destructive. Steam heating the compost intended to be used would be an additional valuable precautionary measure. The Peach leaves are attacked by the shot-hole fungus. The trees should be sprayed with ammoniacal copper carbonate, for which we have recently given a recipe.

NAMES OF PLANTS.—*Horace Inman*.—A variety of *Heuchera brizoides*.—*E. E. J., Clapham*.—1, *Lilium Martagon*; 2, *Campanula carpatica*; 3, *C. rhomboidalis*.—*Mrs. Sartorius*.—1, *Leptospermum scoparium*; 2, *L. flavescens*; 3, *L. myrsinoides*. *Cornus capitata* and *Vaccinium Myrtillus* also enclosed.—*Evinley*.—1, *Lonicera japonica halliana*; 2, *Silene alpestris*.—*C. P., Bournemouth*.—1, *Lonicera japonica halliana*; 2, *Buddleia variabilis*.—*Miss E. L., Cheshire*.—*Mentha Requienii* (Corsican Mint).—*Lielic*.—*Echium vulgare* (Viper's Bugloss).

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY'S SUMMER SHOW.

(Continued from last week.)

ROCK GARDENS AND ALPINES.

THERE were many beautiful summer-flowering alpine on view at this great show, but the rock gardens did not constitute so good a feature here as at the May show at Chelsea. Indeed, those in the open, for the most part suffering, no doubt, from the intense heat, appeared anything but happy, and, arranged largely in conjunction with canvas tents, had not the congenial environment which is so helpful at the other place named.

Taking them as we found them, we first came to a table group from Mr. Clarence Elliott, Stevenage, set up near the entrance. Here, indeed, there were no pretensions to rock-building, the aim obviously being to display good alpine plants effectively, and at the same time suggestively. That much accomplished, both the object of an exhibition and the aim of the exhibitor—the former from one point of view at least—are served. The finer plant groupings were those of *Campanula pusilla* Miss Willmott and *Erythraea Massonii*, the former providing a sheet of pale silvery blue, the latter just a carpet of rich rosy pink. Both were in great numbers, and, working shoulder to shoulder in the group, constituted a most enjoyable whole. Moreover, we revel in these picture-affording examples, which, while good in themselves, point the way to other things. These are not as a blaze of colour of which the eye quickly tires. One is rather drawn to them, and the more we see the fuller we realise their worth. *Campanula raddeana*, *C. pulla*, *C. G. F. Wilson* and other plants were here, too; but those first named dominated the whole by their presence and fine display.

Very near Mr. J. Wood, Boston Spa, had one of his characteristic rock gardens on a large scale in Yorkshire limestone. The rocks, their lie, and the beauty and informality of the whole, left nothing to be desired, and obviously the builder had closely studied this particular rock in Nature. It was not a towering, impossible thing; rather the reverse, one which amid happier environment

would have told effectively and, moreover, have suited a large number of plants. The planting, we thought, was less studiously done. There were faulty associations here and incongruities there, and we do not look for such where the fundamental part is so well accomplished. The miniature-growing Saxifrages, as, e.g., *cassia* and others, akin with the dwarfest of alpine Dianthi, are not fitting associates for the Himalayan *Meconopsis*, even if not in flower, or the Madeira Orchis (*O. foliosa*). Then, again, though this to some extent was unavoidable, the Ferns were in too hot and sunny a place, while the right-hand portion seemed as though all too hurriedly planted with border things, *Geum coccineum* and *Campanula persicifolia* in variety. A pretty rock pool, with Lillies and *Iris laevigata* grouped near, was quite good. There was also much good alpine planting.

In that from the Guildford Hardy Plant Nursery everything rested with the plants, of which *Erpetion reniforme*, *Wahlenbergia dalmatica*, *Oxalis enneaphylla*, *Hypericum empetrifolium* and Cobweb Houseleeks were among the best.

Close to this Messrs. Whitelegg and Page, Chislehurst, had a capital arrangement, using the Yorkshire stone, which alone is quite an ornament. The form, too, was distinct from any other. Notable plants were *Androsace lanuginosa*, *Hypericum Coris*, *Wahlenbergia vineæflora*, *Saxifraga Cotyledon pyramidalis*, which, with Creeping Thymes, *Campanulas*, Cobweb Houseleeks (*Semprevivums*), Dianthus and others made up a very pleasing whole. The Water Lily grouping at the end was very nicely done.

Messrs. Kent and Brydon, Darlington, had a rather mixed arrangement, using *Fagus Cunninghamii*, *Acantholimon glumaceum*, *Allium pedemontanum*, *Nertera depressa*, *Edelweiss* and *Hypericums* on a table space.

The Ightham Alpine Nursery, Sevenoaks, also had a small table with a variety of alpine associated with rock.

In the open, too, Mr. G. Reuthe, Keston, Kent, had a table arrangement, using a considerable variety of choice alpine and other plants. Some of the more uncommon included *Coris monspeliensis* (with bluish flowers), *Erodium Reichardii* (white), *Dryas octopetala*, the rare *Hypericum cuneatum*, *Saxifraga cochlearis*, *S. cassia*, *S. valdensis* and others, *Allium pedemontanum*, and the rare *Anemone nopsis caroliniana*, with white flowers. *Juniperus pachyphloea elegantissima* is notable for its distinct glaucous colour, while Heath, Genista, *Hypericum* and *Ononis fruticosa* each played a good part.

Quite in a spot alone, Mr. Reginald Prichard, West Moors, Wimborne, had a small stand full of choice bits of things. A set of the smaller-growing *Hypericums* at once arrested attention. For example, *H. cuneatum*, with small glaucous foliage, crimson buds and yellow blossoms on a plant of trailing habit, was charming; while such as *H. gracile*, *H. balearicum*, *H. empetrifolium* and *H. crenulatum* were all good and choice. *Campanula Scheuchzeri alba* is a particularly rare sort, and there are others of equal note.

Under canvas Messrs. J. Cheal and Sons, Crawley, had a fine piece of rockwork in Sussex sandstone in conjunction with terrace wall gardening, arranging and planting the whole with admirable skill. Good plant colonies were made up of *Primula capitata*, *Coronilla iberica*, *Erythraea diffusa*, *Campanula garganica*, *C. G. F. Wilson*, *Genista tinctoria* *Elatior*, and Cobweb Houseleeks. The arrangement was well supported by trellis and shrub.

Near by, Messrs. Piper and Sons, Bayswater, had a fine piece of combined rock and water garden, the former executed in excellent taste in Cheddar stone. The planting was remarkably well done, the plants blending with the grey of the rock quite naturally. Thymes, *Campanulas*, Cobweb Houseleeks, *Edraianthi*, *Edelweiss*, *Dianthi*, small shrubs and the like were all employed with good effect. In the water portion and around were Lillies, Japanese and other Irises, graceful Bamboos and other suitable plants. A beautifully designed piece of work throughout.

Mary Countess of Ilchester, Holland House, sent a large collection of *Semprevivums* and Saxifrages in specimen pans, the Cobweb section of the former constituting a very interesting lot. Of these alone there were about ten distinct forms, while the collection constituted a hundred or more.

The Burton Hardy Plant Nursery, Christchurch, had the pretty *Erodium corsicum*, *Primula littoniana*, *Saxifraga cassia*, *Sedum Liebmannii*, *Oxalis enneaphylla*, *Campanula excisa* and *Spigelia marylandica*.

In the alpine group from Mr. H. Hemsley, Crawley, we noted the very beautiful *Doryenium hirsutum*, a pink-flowered, woolly-leaved sub-shrub of a foot or more high belonging to the Leguminosae. It is a most charming plant. *Heeria elegans*, *Campanula pulla*, *Wahlenbergia vineæflora*, *Semprevivum tomentosum*, and *Erythraea diffusa*, a lovely bit of pink colour, were among other good things.

Messrs. R. Tucker and Sons, Oxford, had a small piece of rockwork on tabling, and here, too, some choice alpine were noted. A novelty was *Campanula mollis*, a trailer with rosy lilac flowers and woolly leaves, not very robust as shown. *C. Raineri hirsuta* is at once choice, dwarf and vigorous, an alpine calculated to do good and useful service. *C. excisa*, *C. Miss Willmott*, *Helianthemum tuberosum*, *Saxifraga squarrosa* and *S. mutata* were also noted.

Messrs. Bees, Liverpool, also had choice and new alpine, the outstanding novelty being *Hypericum Læve rubrum*, with flame red, golden-anthered flowers in terminal corymbs on bushes 15 inches high. It is a remarkable plant. *Lewisia Howelli*, *L. Cotyledon*, *Campanula Hostii alba*, *Rosecoea cautilifera*, *Primula pseudo-capitata*, *P. angustidens* and *Dianthus cæsius* Mantle were other good plants in a particularly choice lot.

HERBACEOUS PLANTS.

Mr. Maurice Prichard, Christchurch, Hants, was showing finely herbaceous and alpine plants in the large tent near the entrance. Delphiniums entered largely into the scheme, and there were also fine groupings of *Alstroemeria*, *Lychnis vespertina*, *Phloxes*, *Linolus* and other plants of the choicest description. Japanese Irises were also largely displayed, while many alpinas were found displaying their worth in the foreground. Perhaps one of the more imposing features in this exhibit was a grouping of *Lavatera Olbia*, a shrubby plant whose pink, Mallow-like flowers formed a great attraction.

Messrs. T. S. Ware, Limited, Feltham, exhibited a fine lot of hardy flowers generally, though more especially of Delphiniums, Gaillardias, Lupines, Astilbes, Eremuri and other such things. Alpines in variety, with which the whole group was surrounded, and moisture-loving Primulas, as *rosea*, *sikkimensis* and others, were freely grouped. *Tunica Saxifraga fl.-pl.*, double white, was also freely displayed.

A particularly fine display from Bakers', Wolverhampton, included a large gathering of English Irises, such as *Electric* (mauve), *Clio* (rich purple), *Mont Blanc* and *Jeanne d'Arc* being conspicuous in large groups. In addition, there was a capital lot of Delphiniums, together with other hardy flowers in season.

Messrs. Whitelegg and Page, Chislehurst, had a capital grouping of the more showy herbaceous flowers, Geums, Delphiniums, *Lychnis*, *Verbascums*, *Campanulas*, *Pentstemons* and others in formidable array demonstrating the wealth of hardy summer flowers.

Messrs. Godfrey and Son, Exmouth, had on view a fine lot of Canterbury Bells, particularly in rose, blue and white flowered sorts, the whole arranged in fine pyramids displaying these flowers at their fullest worth.

Messrs. Blackmore and Langdon, Bath, showed some very fine Delphiniums, notably such as *Yvette Guilbert*, *Lord Curzon* (a fine metallic blue with white eye), *Lieutenant Vassens* (mauve) and the pretty cross-bred forms of *D. Belladonna*, including *Mrs. Brunton* and *Moerheimi*.

Messrs. G. Stark and Sons, Great Ryburgh, in addition to a large assortment of Sweet Peas, had some fine spikes of *Kniphofias*, of which *Decorator* was the best. If these had not been forced into bloom they represent a valuable race, much earlier than the majority.

The Misses Hopkins, Shepperton-on-Thames, had a border group of herbaceous plants, followed by a small rockwork exhibit, both being suitably treated.

Messrs. Kelway and Son, Langport, had some very fine Delphiniums, such as *Knight of Langport* (purple, white bee centre), *Polar Star* (creamy or primrose), *Dusky Monarch* (of formidable stature), *Star of Langport* and *James William Kelway* (a very large flower, in purple colour with white eye, well framed on an imposing branched spike).

Messrs. Harkness and Son, Bedale, were responsible for a good grouping of Poppies, Eryngiums, Delphiniums, Lupines and *Verbascums*, the latter very handsome and imposing in their tall, stately spires. Of the more distinct we selected *Lady Allison* (gold), *Nance MacCormick* (rich yellow), *Willie Walker* (orange yellow)—a trio calculated to satisfy any in search of bold subjects suited to wild gardening or bold border work.

From Mr. J. L. Arkwright, Kinsham Court, Presteign, came a well-flowered group of plants of the so-called *Lychnis Arkwrightii*. In the interests of the general body of our readers we are bound to say that this is none other than *Lychnis haageana*, whether in stature, colour variation, form or anything else.

Mr. Vernon T. Hill, Langford, near Bristol, staged *Scabiosa caucasica* in variety, *Campanulas*, *Erigerons*, Delphiniums and, not least, the richly coloured *Gentiana Przewalskii*, which is not too frequently seen.

Messrs. Wells, Limited, Merstham, had some excellent Delphiniums, Gaillardias, Geums and other showy flowers. We were most struck, however, with *Delphinium Merstham Glory*, a very fine double mauve-coloured variety, having a densely furnished spike of flowers. *Le Danube* and *Rev. E. Lascelles* were also important in the group.

Messrs. Gunn and Sons, Olton, Warwick, had a grouping of herbaceous Phloxes in the best varieties, as *Sheriff*, *Ivory*, *Tapis Blanc*, *Elizabeth Campbell* and others of good repute, though not up to their usual exhibition standard of excellence.

In the group from Messrs. G. Gibson and Co., Leeming Bar, Poppies, Delphiniums, *Verbascums*, and *Scabiosa caucasica* in blue and white abounded, and there was also a good grouping of *Pimpinella magna rosea*, a pretty variety of a commonplace plant.

The Guildford Hardy Plant Nursery sent *Spiræas*, *Buddleias*, Gaillardias, *Campanulas*, Day Lilies, *Scabiosas*, *Iris Kämpferi*, Delphiniums and other showy flowers in abundance.

Messrs. W. and J. Brown, Peterborough and Stamford, had a fine grouping of Gaillardias, the more conspicuously beautiful and ornamental being *The King* (a grand crimson, tipped with gold) and *Lady Rolleston* (self yellow) among others. These two compel admiration. *Lilium szovitzianum*, *Eremurus Bungei* and *Ostrowskia magnifica* were all superbly displayed by this firm, the giant bells of the last named on stately, nearly 4-feet-high stems.

Mr. R. C. Notcutt, Woodbridge, had a fine show of *Iris aurea*, *I. laevigata*, Delphiniums, *Lilium Hansonii*, *Verbascums*, *Heucheras*, *Heleniums* and other good summer flowers.

Messrs. John Forbes, Hawick, Limited, had near the entrance a good collection of pot-grown *Pentstemons* and herbaceous Phloxes, both groups well displayed, in excellent condition and in some variety. Delphiniums and border Pinks and *Violas* were also on view.

Messrs. Frederick Smith and Co., Woodbridge, staged a particularly good lot of *Lavatera Olbia* (named in one or two collections *Malva Olbia*), together with *Pæonies*, Delphiniums, *Verbascums*, Gaillardias, *Potentillas*, *Heucheras*, *Scabiosa caucasica* and other flowers.

Messrs. George Bunyard and Co., Maidstone, had a really splendid group of herbaceous flowers, of which English Irises, Poppies, *Verbascums*, early Gladioli and Delphiniums were the chief. Of these latter, *D. Alake*, *Rev. E. Lascelles* and *Queen Mary* (iridescent blue with white eye) were very good. In addition, *Erigeron Edina*, with glittering white florets, is a plant of more than ordinary merit. *Gentiana dahlurica* and *Eremurus Bungei* were very good.

Messrs. Thomson and Charman, Bushey, had in a mixed grouping of flowering shrubs and herbaceous cut flowers examples of *Gentiana lutea*, of which a couple of the whorled inflorescences towered to nearly four feet high. *Verbascum Warley Rose* was also in this group, as was the interesting *Astrantia major*.

Messrs. Wallace and Co., Colchester, had a fine assortment of Delphiniums, Lilies, Eremuri and other noble hardy flowers, as *Iris Mon-aurea*. Of the Lilies, *Hansonii*, *davuricum luteum*, *szovitzianum* and *candidum* were the best; while of the Eremuri, *Shelford*, *Bungei* and *Olga* played their part uncommonly well.

Messrs. Lilley, Guernsey, had *Watsonias*, the graceful *Sparaxis* and early Gladioli in plenty.

Messrs. R. H. Bath, Limited, Wisbech, displayed a fine assortment of Irises, *Pyrethrums*, *Astilbes*, Eremuri, and Delphiniums.

ROSES.

The Queen of Flowers was wonderfully well represented, but the extremely high temperature was sorely trying to the cut blooms. Taken as a whole, the exhibits were quite up to the usual standard, but outstanding novelties were not particularly numerous.

In the big tent Messrs. William Paul and Sons, Waltham Cross, and Messrs. G. Paul and Son, Cheshunt, occupied their usual corner positions. The first named had a most brilliant display, consisting of tall pillar and weeping varieties. Among these *Hiawatha*, *Excelsa* and *Tausend-schön* were very prominent. Beneath were arranged well-filled baskets, each containing a separate variety, notable among which were *Rayon d'Or*, *Ophelia*, *Lady Downe*, *Mrs. C. E. Pearson*, *Prince de Bulgarie*, *Lyon* and several seedlings of promise, the whole making a most brilliant show.

Messrs. G. Paul and Son featured a similar exhibit, *American Pillar* and *Dorothy Perkins* being prominent among the ramblers. Dwarf Polyantha varieties were well shown, while baskets of all the most popular varieties, such as *Mme. Melanie Soupert*, *Rayon d'Or*, *Comtesse de Saxe*, &c., were superbly shown.

Messrs. Hobbies, Limited, Dereham, set up a most effective collection on the tables, the background being filled in with tall weeping varieties, while pillars and vases of cut blooms were set out in the foreground. *Pink Pearl*, *Lyon*, *Lemon Pillar*, *Effective*, *Rayon d'Or* and numerous others were noted in good form.

Messrs. J. Jeffries and Son, Cirencester, made a very effective display on the ground. Tall pillars and weeping standards were a feature, while beneath were arranged baskets and tall vases containing fine examples of *Rayon d'Or*, *Chateau de Clos Vougeot*, *Prince de Bulgarie*, &c.

Mr. G. Prince, Oxford, had a wonderfully bright stand, and here big masses of *Josephine Nicholson* (a fine new salmon), *Rayon d'Or*, *Mrs. Aaron Ward*, *Lady Pirrie*, *Mrs. A. Tate*, &c., were most effectively set up.

Messrs. W. and J. Brown, Peterborough, invariably show well, and on this occasion they exhibited some brilliant flowers in all the leading varieties, including *Marquise de Sinety*, *Melanie Soupert*, *Leslie Holland* and the brilliant and sweet-scented *Effective*.

Mr. Elisha J. Hicks, Twyford, featured his beautiful crimson single, *Princess Mary*, together with *Mrs. George Norwood*, *Mrs. Charles Reed*, *Comtesse du Cayla*, *Leontine Gervaise*, *Rayon d'Or* and *Lyon*.

Messrs. B. R. Cant and Sons, Colchester, made a great feature of the new and magnificent red, *Auguste Hartmann*. *Mrs. R. E. Grosvenor* was also well shown, while a great number of all the leading favourites were brilliantly displayed.

Practically all recent novelties were staged by Messrs. Alex. Dickson and Son, Newtownards, and right well did the firm acquit itself. *Queen Mary*, *Red-Letter Day*, *Mabel Drew*, *H. V. Machin*, *Janet* and *Lady Plymouth* were a few of the varieties noted.

Messrs. Hugh Dickson and Co., Limited, Belfast, despite the long and trying journey, succeeded in showing a number of new varieties in good form. *Ethereal* (an improved *Simplicity*), *Oriflame*, *Ulster Standard*, *Radiant Morn* and others were effectively displayed.

Messrs. G. Bunyard and Co., Maidstone, put up a small but bright collection.

Mr. W. Easlea, Eastwood, managed to get almost every variety worth growing on the small space allotted him. *Rayon d'Or*, *Melanie Soupert*, *Leslie Holland*, the new *Cherry Page*, *A. R. Goodwin* and *Lady Hillingdon* were a few that caught the eye.

Messrs. Jarman and Co., Chard, had some magnificent boxes containing blooms of full exhibition quality. The eighteen blooms of *Juliet* in one box were the best we have seen this season.

Messrs. Frank Cant and Co., Colchester, set up a very pleasing exhibit, the new climber, *Braiswick Beauty*, standing out prominently. *Cupid*, *Beaulah* and *Mona O'Neil* were other taking features.

Messrs. George Jackman and Sons, Woking, had a great number of varieties on view.

Messrs. H. Lane and Son, Berkhamsted, also displayed a bright little collection.

A very good ground group was arranged by Mr. R. C. Notcutt, Woodbridge, and here *Mme. E. Herriot* shone in all her glory.

One of the best displays was that of Messrs. Stuart Low and Co., Bush Hill Park. Nothing later than 1913 varieties were shown, unless one classes the American *Mrs. Charles Russell* as a 1914 novelty; but each variety was in great form and shown in quantity. Some of the most prominent were *Mrs. Charles Russell* (a very fine pink), *Rayon d'Or*, *Chateau de Clos Vougeot*, *British Queen*, *Miss Alice de Rothschild* and *Lady Pirrie*.

Messrs. Morse Brothers, Woodbridge, staged some excellent flowers; while in the big tent Mr. Charles Turner, Slough, set up a fine group of rambler and other varieties. Some bright bits of colour were noted in this group.

The Rev. J. H. Pemberton, Havering, made a little display with seedling *Roses*, *Danée*, *Winter Cheer*, *Moonlight*, *Galatea* and *White Rambler* among them. All are of the same rambler type.

SWEET PEAS.

A capital lot of blooms, was set up by Robert Sydenham, Limited, Birmingham, and the founder's namesake was in great form. Other superb varieties were *King White*, *Princess Mary*, *Thomas Stevenson*, *Maud Holmes*, *Barbara*, and *Lady Evelyn Eyre*.

A superb exhibit was staged by Sir Randolph Baker, Bart. (gardener, Mr. E. Usher), and the strength of his flowers suggests a warm time at the coming shows. *Edith Taylor*, *King Manoel*, *Constance Hinton*, *Thomas Stevenson*, *Edna May*, *Hercules*, *James Box* and *Lady Evelyn Eyre* were simply immense. The flowers were set up in vases and upon tall pillars, the whole making a most effective stand.

Messrs. S. Bide and Sons, Farnham, staged all the most popular varieties and several telling novelties, including *Phyllis Bide*, a fine deep orange, set up in effective fashion.

Messrs. Gilbert and Son, Dyke, Bourne, Lincs, displayed some very good blooms, together with *Liliums*; as did Messrs. Jarman and Co., Chard.

CARNATIONS.

Messrs. William Cutbush and Sons had some very nice Carnations and a few Pinks in pots. These were grouped in company with *Polyantha Roses*, *Cannas* and *Palms* into an effective mass. Among the Carnations we thought *Lady Coventry*, *Mercia* and *The Queen* three very taking varieties.

Mr. Charles Turner had some three hundred plants of good standard varieties of *Malmaisons*, including *Mrs. Trelawny* (salmon pink), *Lady Middleton* (flaked pink), *Thora* (pale blush), *Maggie Hodgson* (Old Clove colour and very sweet), *Irene* (deep blush) and *Princess of Wales* (pink). These were surrounded with *Polyantha Roses* of various kinds, mixed with *Nephrolepis todeoides*, *Adiantum cuneatum* and other Ferns.

Messrs. Young and Co., of Cheltenham had one of their usual fine displays. Five large stands were prominent at the back of the group, with smaller vases and bunches in front. *Lady Henderson* is a strong-stemmed, vigorous-growing warm pink, and was shown in quantity for the first time. The Hon. John Boscawen (medium pink) is another new variety, and so is *Lady Greenall*, which is one of those colours which are difficult to determine, but which might not inappropriately be compared to claret and lemonade.

Messrs. Stuart Low and Co. had a group of *Cleopatra*, which, now we are reminded of beverages by the heat, we think is not unlike good old port in colour. This was flanked on either side by paler tints, such as the pink *Princess of Wales* and the lovely rose *Gorgeous*, which is quite the ideal colour for table decoration under artificial light. Other good things were *Ceres* (a perpetual *Malmaison* of the colour of *Enchantress*) and *Venus* (a white with an occasional trace of carmine in some of the petals); so far from taking from its beauty, these flecks do for *Venus* what patches did for our great-grandmothers.

Mr. James Douglas as usual had his superb border varieties. *Gordon Douglas* was shown under name for the first time. It is a light bright crimson of perfect form, with strong stems and a delightful Clove scent. The *Ameer* is its counterpart in a deeper shade, but not quite so sweet-smelling. *Daisy Walker* is a flower of quite a different type. It is a white-ground, lightly flaked *Picotée*, the few stripes of colour being of a bright cerise.

Mr. A. F. Dutton had grand baskets of *Mikado*, *May Day* and the pretty deep pink *Mrs. A. F. Dutton*.

Mr. C. Engelmann staged on the ground. In a prominent position was a column of a grand rose called *Pioneer*. On either side were smaller masses of *White Pioneur*, *White Enchantress*, *Lady Northcliffe* and *Beacon*. The bottom of the group had good examples of *Lucy* (deep salmon pink), *Sunstar* (yellow, with small red splashes), *Scarlet Carola* (a sport from the old clove *Carola*), *Mrs. Raphael* (red) and *Marmion* (Painted Lady type).

SUNDRIES.

"Ubel" sprayers and syringes were prominent, and the lime-washing machines, so useful for shading during the hot weather, were special lines shown by the United Brassfounders Company, Cranbrook, Manchester.

AWARDS.

SPECIAL CUPS.

Coronation Cup, for the best exhibit in the show: Messrs. Wallace and Co., Colchester, for a water garden and Japanese Iris.

The Wigan Cup for *Roses*: Mr. E. J. Hicks, Twyford, Berks.

The Clay Challenge Cup, for a *Rose*, not in commerce, possessing the true old *Rose* scent: Messrs. William Paul and Son, Waltham Cross, for *Rose Queen of Fragrance*.

THE GARDEN.

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NOTES OF THE WEEK.

Pentstemon Douglasii in the Rockery.—This striking, shrub-like plant, with its pale blue or lavender flowers, has been very fine this season; indeed, it seems surprising that so few of these plants are to be found in the rockery or wall garden. They bloom continuously over a long period, so much so, indeed, that they generally make very little growth. Cutting off a flower-spike induces them to produce cuttings freely, which may be taken off now and rooted under a handlight. They should make nice plants by the spring.

A Pleasing Combination.—We were interested the other day to find a good group of the beautiful *Campanula persicifolia humosa*, a charming pale blue, semi-double form of the well-known Peach-leaved Bellflower, among which *Silene Armeria* had been sown in the spring. The pleasing pink of the *Silene* made an excellent groundwork for the tall spikes of the *Campanula*.

The Deodar Producing Cones.—From the fact that the tree seldom produces cones in this country, it is worth recording that a tree by the side of the Broad Walk at Kew is maturing a number of cones this year. A native of the Himalayas, *Cedrus Deodara* was first introduced to Britain in 1831. With age the trees assume the familiar flat top of the Cedar of Lebanon. Why the Atlas Cedar (*Cedrus atlantica*), though not introduced until ten or twelve years later, should produce cones in abundance and the Deodar rarely, seems difficult to understand, unless it is because the Himalayan tree is less hardy.

Dianthus gracilis.—What *Viola gracilis* is to the mountain Violas, *Dianthus gracilis* is to the rock garden *Dianthi*. It is the daintiest, most informal and the most exquisitely coloured of any *Dianthus* it has been our pleasure to meet. We grow a good range of *Dianthus* species and hybrids, but there is nothing among them to equal the delicate beauty of *gracilis*. The leaves and stems are very glaucous, and the flowers are of a brilliant rosy pink shade (a pink without magenta). The flower-stems are branching, and the tiny blossoms are beautifully poised at the tips. The petals are delightfully irregular, with nothing of the exactness of the majority of *Dianthi*, and in this and its extreme delicacy of form lie its wonderful charm.

Yellow Foxgloves.—The old order of yellow Foxgloves is passing, giving way to the new. The old-fashioned *Digitalis ambigua* and its allies were at the best only curiosities in the garden, but the new yellow forms, raised from the improved strains of our charming native *D. purpurea*, are both of great decorative beauty and of sterling service to the garden generally. To one who loves the white, pink and rose hued Foxgloves, the new

flowers as they bloom, and drying them well. To these allow 1lb. bay salt, 2oz. saltpetre, one Nutmeg, half an ounce of Cloves and half an ounce of Allspice. Next add 1oz. of Bergamot and 6oz. powdered Orris Root. Allow next one drachm each of spirits of Lavender and essence of Musk and Lemon. Mix all the ingredients together, put them into a deep china bowl or jar, add the dried petals and mix them very often."

Staking Pentstemons.—The staking of the taller-growing varieties should be attended to without delay. Such varieties as Mrs. John Forbes, Negress and George Holmes will in many cases grow over three feet in height, and, if once allowed to fall over, they never give the same results.

A Good Pink Bedding Rose.—One of the best bedding Roses of comparatively recent introduction is Miss Cynthia Forde. As will be seen in the illustration, it makes a shapely spreading bush and produces its flowers in profusion. These are a pleasing shade of soft pink, something after the tint found in Gustav Grunerwald, but the shape of the flowers is quite different. The petals fold over each other very neatly, but the blooms are rather flat. They are fragrant, though this desirable feature is not so pronounced as in some Roses. The foliage is always neat, smooth and good, and resists mildew as well as that of any Rose we know. The bush illustrated was planted two years ago last February, and is now about three feet high.

Sweet-Scented Pinks.—The Pink is an old denizen of British gardens, and it should be one of the sweetest. Association seems to demand this. We have been led to make the above trite remarks by a visit we paid to a skeleton garden at Uppingham last June. It had been a green hillside twelve months before, so to clothe its



ROSE MISS CYNTHIA FORDE, A PINK-FLOWERED VARIETY FOR BEDDING.

yellow will come as a pleasant surprise, and, with a little improvement and due selection of the best forms, we venture to say that in a few years they will attain an immense popularity.

Recipe for Pot-Pourri.—At the request of several readers we publish an old recipe for the making of pot-pourri: "Allow six handfuls of mixed Rose petals, add to these three handfuls of Orange Flowers, Carnations and Clove Pinks, also of other sweet-smelling flowers two handfuls, adding the

nakedness a large quantity of the real old-fashioned small double white Pink had been planted literally all over it. It was a warm day, which no doubt helped to bring out the perfume. The gratifying fragrance of that garden will remain in our memory. As far as we are aware, none of the larger and newer varieties, like Mrs. Sinkins or Her Majesty, are as sweet. Hence this is a plea for the more extensive use of the small old double Pink in gardens.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Sweet-Smelling Rosaries.—Mrs. Gore's "The Rose Fancier's Manual," 1838, page 79, has the following: "The *Pastilles du Serail*, sold in France as Turkish, in rosaries and other ornaments, are made of the petals of the Belgian or Puteaux Rose, ground to powder and formed into a paste by means of liquid gum. Ivory-black is mixed with the gum to produce a black colour; and cinnabar or vermillion, to render the paste either red or brown. It may be modelled by hand, or in a mould; and when dried in the sun, or a moderate oven, attains sufficient hardness to be mounted in gold or silver." Rosa Gallica would probably be better than the Belgian, since the former gains in scent on drying, while the latter loses scent. Rose water might be used to melt the gum, or a drop of otto of Roses might be added to the soft mass.—BARROW THORP.

Wasps' Nest on Rhododendron.—I enclose a photograph of a wasps' nest that I destroyed with cyanide of potassium on June 22. You will notice that it was built on the top of a Rhododendron bush about six feet from the ground. The small point projecting at the bottom of the nest is where the creatures were going in and out. I thought it was worth sending to you if you care to reproduce it in your paper for the benefit of your readers. I might add I always dissolve the cyanide of potassium in hot water and cork it tightly in a bottle; then tie some cotton-wool on the end of a Bamboo cane and well soak the wool before putting it in the nest. I find it is more economical than using the cyanide dry, and quite as effectual.—GEORGE GUMBRELL, *The Garden*, Rose Mount, Ascot.



WASPS' NEST BUILT ON THE UPPER PART OF A RHODODENDRON SHOOT.

also lately added prizes for queen wasps. In this village alone the competitors accounted for 2,382 queens.—E. M., *Swanmore*.

Rose American Pillar, and Some Others.—A note to confirm your opinion (page 337, issue July 4) of this fine Rose. At the present time it is at its best with me, and out of a run of 300 feet of garden fencing that I am glad to say is entirely covered with rambling Roses, American Pillar for general effectiveness is *facile princeps*. Its enormous clusters and fine flowers that do not fade in the hottest sun, fine growth and foliage, all make it stand out. Minnehaha is still the best pink, much to be preferred to Dorothy Perkins; Lady Godiva, the best of all the Dorothy Perkins sports; Shower of Gold, the best yellow; but Goldfinch was magnificent three weeks ago. Excelsa, the best crimson, is more effective than Hiawatha; Tausendschön, now over, but quite indispensable; François Juranville and Miss Helyett, the latter very early, but very fine large flowers, resembling

the cup was offered. I should not have worried you with this communication were it not that I found a good number of others of my opinion. I may add that I am not interested in the most remote degree with either of the firms in question; but had I been judging, I should certainly have placed the prophet before the apostle on this occasion.—OLD ROSE. [We have ascertained that our correspondent has no financial or other interest in Mr. Hicks, and, in fact, does not even know him. We publish his letter, as the point was one that we heard freely discussed at the show, and we are holding over further correspondence on this subject until the publication of our next issue.—ED.]

Groups at Holland House Show.—In your report of Holland House Show, you mention that Messrs. W. Wells and Co., Limited, were exhibiting Gaillardias and Delphiniums. This is not the case, as I have taken over the whole of the hardy plant department.—W. WELLS, JUN., *Hardy Plant Nurseries*, Merstham, Surrey.

Naming of Daffodils.—"What's in a name? A Rose by any other name would smell as sweet." That is all very well if one wishes merely to gratify the nose, but I take it neither Juliet nor the immortal William was a gardener or horticulturist, or the question would not have been asked. I think it is worth a little trouble to select an attractive name for a new variety of merit, for it may make a difference in its reception by the public, especially where they have only catalogue description to go on. I have noticed in recent catalogues, &c., certain names that are not attractive, and I feel inclined to enter a mild protest against the labelling (or libelling) of the Narcissus of classical origin and graceful, stately outline with such uncouth appellations. Without an interpretation, a grotesque name like Mowgli does not appear to have much to commend it, while Swashbuckler, Rags and Tatters, Bulldog, Whelp, &c., though possibly they may be appropriate, do not convey to me a favourable impression, but straightway prejudice me against the bearers of such unprepossessing names. I know it is not easy to find taking names for all the

new Daffodils coming forward each year; for one reason, so many good names have been used up on inferior things which have not come to stay; still, I venture to think we need not yet dub our favourites with unattractive cognomens. English personal names and titles are fortunately not so unwieldy as Continental ones, and are freely resorted to; but even in this line it seems to me somewhat weak to name Roses, Dahlias, Sweet Peas, Carnations, Daffodils, Chrysanthemums, &c., in turn after the same person. I like to see names reasonably short and euphonious, characteristic, as far as may be, of the subject, of good or refined origin or associations, or with some other feature likely to arrest attention or connect the name with the particular flower. I do not know the procedure for registering new varieties in the Royal Horticultural Society's Classification; but do you not think the society might exercise some censorship, and make an effort to preclude ugly names from the list, which contains remarkably few to which exception may reasonably be taken? —A. E. G., *Auckland, New Zealand*.

that good Rose Lady Waterlow in the bud and that fine Tea Mme. Antoine Mari when fully out. The only scarlet wichuraiana is Diabolo. This is quite good, and the flowers keep their colour; it can be strongly recommended. We still want a good white. My White Dorothy is very good, but it will come pinkish at times, which rather spoils it. Crépuscule, a Rose of French origin, of delightful pink and orange colouring, carried hundreds, possibly thousands, of its pretty blooms in early June. Evangeline, a tremendous grower, is very sweet, although its flowers are fleeting and single. Pink Pearl is very pretty as a pillar.—HERBERT E. MOLYNEUX.

The Most Fragrant Rose.—I went round the tents rather early at the Holland House Show, and at that hour a Rose (I forget its name) shown by Messrs. Paul was labelled as having won the cup presented by Messrs. Clay. I do not know whether this award was subsequently confirmed, but I hope not, as, in my opinion, the Rose Mrs. George Norwood, shown by Mr. Elisha Hicks, complied better with the conditions under which

School Flower Shows.—In reference to the recent correspondence on this subject, for years I have done much to encourage the holding of shows in villages for the benefit and instruction of the children. The Bishop's Waltham Horticultural Society long ago established branches in several villages in its area, holding exhibitions in June each year for cut, wild and other flowers, and their arrangement in vases, baskets, table decoration and so forth. These shows are held with a view to encouraging and teaching the children how to arrange a simple posy or basket of wild and garden flowers in an appreciative manner, so that they may be all the better able to brighten their homes with flowers which in the country are so plentiful. We find, too, what a vast improvement is made, even after a couple of years' tuition, especially in the blending of colours. The society provides vases all alike, so that the children start on the same basis. Baskets and tables are also found by the society, and the prizes are useful, which is a distinct encouragement to the youthful competitors. To enable the scholars to become better versed in the names of our native trees and shrubs, as well as many others growing in the country, prizes are offered for the best collection of twigs of trees and shrubs correctly named. We have

A Hardy Pear for the North.—Happening to look over a back number of *THE GARDEN* (June 13), my eye has fallen on an enquiry by "H. H. A., Glasgow," for a good recent variety of Pear to suit that district. Let me suggest to him to try a tree or two of Doyenné du Comice, one of the very best in size and flavour, and which, to my surprise, I find also one of the hardiest. In the garden here, though subject to much hoar-frost in spring, and not in a Pear soil, it blooms and sets and ripens with more certainty than any of the older and local varieties, and this without any protection whatever, at any season. It is, however, on a wall facing south. I doubt whether it would ripen in any other aspect.—K., *Fife*.

Lightness in Table Decorations.—I have recently received a schedule of a well-known Yorkshire horticultural society. It contains a section entitled "Hints to Exhibitors," part of which is devoted to table decoration. The gentleman who is giving these hints says with regard to table decoration "that it is a mistaken idea that everything used should be as light and flimsy as possible. . . . I should never think of decorating a table with Sweet Peas and Gypsophila elegans." He then goes on to recommend Roses alone. What is the opinion of your readers on this subject? I myself am an exhibitor, and have met with some success in this class; but to my mind Sweet Peas and Gypsophila elegans are ideal subjects for table decoration. Also, I think that table decorations *should* be as light as possible, so as not to obstruct the vision of the persons sitting at the table.—H. A. ELLIOTT.

Roses on Their Own Roots.—I see in June 27 issue of *THE GARDEN* a note from a reader, signed "E. M.," on Roses on their own roots. I may say that I think many of the climbers do exceedingly well on their own roots. I have annually rooted cuttings now for upwards of fifteen years, and find that if taken at the right time (either late September or early October) and planted in a suitable position, not many varieties will fail to strike. If left in the cutting-beds for the following season, not many varieties fail to do well, and especially the climbers. I have now in full bloom several large bushes of that lovely climber, Goldfinch, and I think they look even better than the parent plant. I also find that Lady Ashtown, Mme. Abel Chatenay, Irish Elegance and many other fine Hybrid Teas, also the Polyanthas, such as Cecile Brunner and Perle d'Or, do well on their own roots.—T. R.

Anent this subject, raised by "E. M." in June 27 issue of *THE GARDEN*, page 326, I offer a few words of my experience dealing with dwarf and pillar varieties over a number of years. No weak or delicate growers of either section of Roses should be dealt with unless they can be treated more generously both as regards soil and position than is customary, and even then it is questionable if they would prove as satisfactory as budded or grafted plants. On the other hand, vigorous growers do remarkably well from cuttings for a number of years—long enough, I think, to justify the method and time spent—though I willingly admit the probability that budded specimens would prove the stayers eventually. The variety that has done best here is Caroline Testout, and perhaps a little later on I may be able to forward a photograph showing a bed of own-root Roses in flower. Others that have done well are Frau Karl Druschki, Mme. Ravary, Mme. A. Chatenay, and Mme. Edmée Metz. Among climbing varieties,

Dorothy Perkins, Crimson Rambler, Conrad F. Meyer and Tea Rambler have done splendidly, also Grüss an Teplitz as a bush.—C. T., *Highgate*.

Ozothamnus rosmarinifolius.—The effect given by using this beautiful shrub as dot plants and for heightening the back of a rock garden is well illustrated in the rock garden here, where we have been successful in growing it without much difficulty for a number of years. The flowers, which are open now, are similar to some of the Spiræas and of a pleasing white, and add considerably to the floral effect produced by the many Rock and Sun Roses, Campanulas and Sedums flowering at the same time. Unfortunately, it is not sufficiently hardy to withstand a severe winter; consequently, a position which is sheltered from the north and east is advisable. Apparently it is a shrub which will grow in almost any soil, but I notice a considerable difference where the soil is enriched by leaf-mould and sand. Its habit and appearance is much like the ordinary Lavender; but pinching of the main shoots is necessary in the spring to get a well-shaped bush. A native of Australia, it is not very common in England, but well worth growing.—GEORGE BURROWS, *Shendish Gardens, King's Langley*.

White Ointment Roses.—Although Rosa alba was considered to be "drying, binding and cooling," it was little used in medicine except for diseases of the eyes, and for this purpose chiefly the distilled water, but also occasionally in the form of a cataplasm or a powder. The old Ointment of Roses was made of Gallica Roses (the red Rose), although de L'Obel in his "Animadversiones" on Rondelet, 1605, says that if the juice of white Roses is used to make this ointment and a little alum added, a fine (*per eleganti*) yellow colour is produced. This juice and alum was also used by painters. "The Grete Herbal," 1527, under the heading (R)osa, says that "They that have a pale/wane/whytysshe or blacke colour ought not to be put in medycyne." The nearest ointment at the present day in the British Pharmacopœia is the Unguentum Aquæ Rosæ, commonly known as cold cream. There are still some dozen or so preparations containing Roses in the Pharmacopœia. "Salmon's Herbal" gives fifty-one preparations of Roses, and this, of course, does not include many well-known preparations into which the Rose entered as a minor ingredient. By the way, the erudite composer of the last acrostics which appeared in *THE GARDEN* stated that William Salmon was Physician to Queen Anne. Now Salmon was capable of "spatch-cocking" a prayer into one of his popular medical works thanking Heaven for making him so clever, good and kind, and obviously just the very physician required by his readers, and he would have been quite incapable of leaving us in doubt had he been Physician to the Queen. "Anne Amateur" gave a charming recipe for ointment of white Roses in *THE GARDEN* of August 9, 1913, and also a partial description of an ointment pipkin. Could you persuade her to let us have a sketch or a photograph of the pipkin?—BARROW THORP. [We would be glad to have a photograph.—ED.]

FORTHCOMING EVENTS.

July 21.—Southampton Show (two days).

July 22. — Flower Shows at Leamington (two days), Hayward's Heath, Preston (two days); Cardiff (two days), and Yorkshire Agricultural Show at Bradford (three days).

PLANNING AND PLANTING THE LITTLE GARDEN.

OUR competition for the best designs for planning and planting the little garden has created world-wide interest, and applications for the site plans have been received from nearly every part of the world. There is still time for new readers to enter, as the completed plans need not reach this office until September 1. For the benefit of those who may not be acquainted with our competition, we may briefly state that we are offering cash prizes to a total value of £33 12s. and a number of book prizes for the best designs. Those who have not seen the rules and conditions governing this competition may secure them by applying to the Editor of *THE GARDEN*, 20, Tavistock Street, Covent Garden, London, W.C., and enclosing 1d. in stamps to cover the cost of postage. The coupon this week appears on page vii.

THINNING APPLES.

[In Answer to a Correspondent.]

OUR correspondent says, "Could you tell me the proper way to thin Apples? I have never known Apples to set like they have done this year. Bunches of five, six and seven all over the tree are quite the rule, and they all seem equally vigorous."

Those readers of *THE GARDEN* whose crops of Apples have been destroyed by recent heavy frosts may be excused if the reading of the above statement causes their mouths to water. Happy "Devon," to be immune from such tragedies? There is always a reluctance on the part of amateurs (and, we are afraid, on the part of many gardeners as well) to sufficiently thin their fruit crops, no matter what kind of fruit it may be. As for the reason or cause for this, we will not now stay to enquire. But we may be allowed to point out the loss and injury caused to the fruit and to the trees by not attending to this important work in good time. Take our correspondent's Apple trees. Supposing he does not thin his crop, what will be the result, say, as regards the money value of the crop when the fruit is ripe? The fruit will simply be half developed, stunted, juiceless and tasteless, and in the market would scarcely fetch the cost of carriage; and what about the poor tree, half starved by the burden it had to carry? Trees cannot speak. If this one could, we dread to think of the quality of its language! Instead it sickens and refuses to bear a similar infliction for at least two or three years. Where does the wisdom of our cropping come in? Reverse the conditions. Let our correspondent reduce the number of Apples to, say, two of the best in each bunch, including the crown fruit in each case. Possibly he will lose something in the weight of crop, but the quality, which, after all, in fruit is everything (especially if grown for consumption at home), would be perfect as compared to the others, and the price, if sold, would be top price. It is the same with all fruit. Take the Peach or the Nectarine. If you want to destroy the rich quality of its flesh and the delicious sweetness of its flavour, overcrop your trees, and you are bound to do it. Lesson: Undercrop all fruits in preference to incurring the danger of overcropping.

JULY NOTES ON CARNATIONS.

SINCE last writing, instances have been brought to my notice of border Carnations proving intractable in certain soils which produce vegetables, fruits and flowers in general, especially Roses, of a quality leaving nothing to be desired. Soil is not everything, by any means, position having a very real predisposing effect, and, provided we have young, healthy plants and an airy position, it should be possible to manipulate soil of any nature to meet their requirements. In pot culture it is evident that anything from peat to a clayey loam will yield results more or less satisfactory; hence the object, where there is a difficulty in their outdoor cultivation, is to endeavour to provide a proper rooting medium.

Early versus Late Layering.—Of probably more importance than soil and climate is the condition of the young stock. It is quite obvious

needed strength in spring, and so struggles through the summer a miserable object; and it is worth remarking that all the old writers on the Carnation favoured early propagation, some in June, none later than July; only it must be remembered that early rooting must be followed by early transplantation, as, directly the roots are advanced enough to admit of it being effected without a check to growth, every day that elapses beyond that renders the layer less valuable as a plant. In heavy soils, in which root action is concentrated within a lesser circumference, the effects are less noticeable than in light soils, through which roots elongate in all directions.

The Operation of Layering is very simple, much more so than it is often supposed, and there are varieties which root with so much facility that merely notching the stem, and keeping the part notched close to the soil by means of a stone to steady it, is followed by the production of roots. In gardening it is not always wise to use such simple means, and the old-fashioned split stem should be adopted. With many soils, again,

keep several layering. Personally, I never remove any leaves unless they are diseased. The fixing of the layers is undoubtedly the crux of the operation, and clumsy workmen will frequently destroy more by breaking than they preserve. A lengthy layer can be made secure of fracture by twisting it, and one too short to twist, when pressed back and slightly elevated while the process of placing it in the soil is being performed, will not snap off the parent plant.

The tongues of layers sometimes curl up, and so, being raised above the surface, never root. This is prevented by fixing the usual peg so that it embraces the tongue of the layer as well as the part necessary to hold it down. The peg suitable for this purpose is made like a hairpin and not hooked. Hairpins are suitable, also pieces of Snowberry and Bracken, doubled, where these are to be had. Pieces of Willow may also be used, but these are apt to root, while strips of Bamboo or cane will be found equally suitable.

I will only indicate another item in the economy of propagation, viz., do not insert the tongue deep in the soil. If a quarter of an inch above the slit be covered with soil, as well as the tongue, that is ample, and, with an occasional application of water in dry weather, rooting will be more successful than if the tongue were inserted to a greater depth.

R. P. BROTHERSTON.



A SPRAY OF THE AMERICAN FRINGE TREE CHIONANTHUS VIRGINICA.

that the propagation of border varieties is frequently belated beyond reasonable limits. Like other plants, the Carnation, for propagating, has a special period when roots are emitted in a brief time and produced with great abundance. It never happens that this period is forestalled, too late layering being the mistake. Now it is clear that a slow-rooting and, at that, sparsely rooted layer at the period when growth terminates for the year is in the very worst condition not only to winter safely, but it never acquires

it is not essential to introduce a compost as a means to induce root action, but here again it is a small matter, and if anyone cherishes a fear about it, certainly use a light compost. Only—and it is a very special “only”—see that the material is arranged so that the layer roots into it, and not, as I have very frequently seen, placed so that the layer is quite altogether underneath it. The slitting of the stem is a simple operation, and where there is a large number of layers to operate, one man should be employed. A clever hand will easily

while those of *C. virginica* push out near the ends of last season's shoots below the new growths. The petals of *C. retusus* are shorter and the inflorescence more erect. The Chionanthuses belong to the Natural Order Oleaceæ. They thrive in loamy soil and are best propagated from seeds, which can be readily obtained from America. The Chinese species can be grafted on *C. virginica*, or it may be layered, as also can good forms of *C. virginica*, of which there appear to be several.

A. O.

THE FRINGE TREE.

(CHIONANTHUS VIRGINICA.)

IN common with numerous other deciduous shrubs, *Chionanthus virginica* has flowered this year more freely than is usual in this country. A native of the Eastern United States, the American Fringe Tree was first introduced in the eighteenth century to British gardens. It forms a bush up to 10 feet or more in height, which at the end of May or early in June produces lovely feathery white inflorescences. The flowers are fragrant, a close inspection revealing the fact that the fluffy or fringed character is due to the petals being very long (exceeding 1 inch) compared with the width. It is interesting to note that the only other species, *C. retusus*, is a native of China. There is thus but one representative of the genus *Chionanthus* in the Old World, and one in the New World. The Chinese Fringe Tree flowers at the same season as its American ally, but is readily distinguished from it, as the flowering panicles of *C. retusus* are borne on the ends of the present season's growths,

SOME GOOD AND USEFUL HARDY SHRUBS.

THE OSMANTHUSES.

SEVERAL useful evergreens are found in this genus of shrubs or small trees, which may be planted throughout the greater portion of the British Isles although one or two kinds are only suitable for the milder parts. The best-known species is *O. Aquifolium*, which is sometimes known as *O. Aquifolium ilicifolius*. This, the Holly-leaved Osmanthus, is a native of Japan, whence it was introduced nearly sixty years ago. It is known here as a bush 6 feet to 10 feet high, but travellers in Japan mention plants between 20 feet and 30 feet in height. Its most noticeable feature is its dark, Holly-like leaves, which average about two inches in length and are those of the Holly except that they are arranged in opposite pairs, while those of the Holly are alternate. They go further, however, in their Holly-like character than is noticeable at a casual glance, for as the bushes advance in height the upper leaves lose their spiny character and the margins become entire as in those of the Holly. It is also possible, as in the Holly, to perpetuate the spineless form by rooting cuttings from the upper part of a mature bush. Plants so raised may produce a branch or two with spiny leaves, but as a rule the spineless character is maintained. The form with spineless leaves has been given the varietal name of *myrtifolius*.

Added to its usefulness as an evergreen, *O. Aquifolium* is worth growing for the sake of its fragrant, white flowers, which appear in small clusters from the leaf-axils between early October and Christmas. Besides the one mentioned above, there are other varieties, such as *rotundifolius*, a low-growing, compact shrub with dark green, rounded leaves; *purpureus*, with leaves of a dark purplish hue; and *variegatus*, with silver variegated leaves. There is also a variety or two with golden variegation. Of all the varieties, *purpureus* is the most useful, and perhaps even a better shrub than the type. This species and its varieties are quite hardy.

Another fairly well-known plant in gardens is *O. Fortunei*, a very vigorous shrub with large, dark, rather dull green, oval leaves, sometimes 3 inches to 4 inches long and 2 inches to 3 inches wide. In the milder counties it sometimes exceeds 12 feet in height. The white, fragrant flowers are borne during October and November. It is said to be a hybrid between *O. Aquifolium* and a somewhat tender Chinese species, *O. fragrans*. Although hardier than the last named, it cannot be grown so far North as the other parent. *O. fragrans* is recognised by its broadly ovate or oval leaves with spiny margins, and by its large, white, fragrant flowers. Although it can be grown out of doors in Cornwall, it is too

tender for border culture in the neighbourhood of London.

Within recent years two new species have been received from Western China: *O. armatus*, seeds of which were sent by Mr. Wilson to Messrs. Veitch early in the present century; and *O. Delavayi*, which was introduced to this country by way of France. *O. armatus* is described as growing upwards of 12 feet high in its native country. The thick, oblong leaves are sometimes as much as 6 inches long and $1\frac{1}{2}$ inches wide, dark green and edged with spines. The fragrant, white flowers are borne in autumn. It is yet

the right stuff, which the old time-worn paving-stones characterise so well, they present a feature of antiqueness which, if in keeping with the surroundings, is pleasing in the highest degree. This is admirably borne out in Lady Clayton's beautiful riverside garden at Harleyford, Bucks, as may be seen by the illustration below.

It is another thing, of course—savouring of incongruity and of much bad taste—when the modern antique, the carefully broken Victorian pavement stone, that of finely ground granite and cement, is introduced and associated with



A PAVED GARDEN NEAR THE RIVERSIDE AT HARLEYFORD, BUCKS.

too early to say whether it will prove as hardy as *O. Aquifolium*. The other new species, *O. Delavayi*, is a very different plant. Found in Yunnan, it is said to attain a height of 6 feet in that country, although it grows slowly here. It is distinct from other kinds by having its fragrant, white flowers produced from the points of the branches, as well as from the axils, in spring.

PLANTS FOR PAVED WALKS.

THE paved walks of the garden are in large degree a modern innovation, copies or imitations, doubtless, of those which have done duty as such—whether for the sake of convenience or expediency it matters not—for a century or more in wayside cottage gardens in all parts of our delightful rural England. And, moreover, they supply a want and have come to stay. In the first place, properly conceived and executed in

buildings genuinely antique, or even decidedly modern. In such instances the practised eye of the true garden artist or landscape gardener will at once miss the time-worn, unequal corners of the older flags, just as the hand of the connoisseur of antique furniture will miss and decide by touch alone whether the example before him is genuinely antique or not. In both Time has played a part, robbed or divested each of their sharp, rigid edges, moulded and fashioned them as Nature does in her own sweet way to the hillsides by which we are surrounded. Hence to get hold of the right material at the start is an important matter, and, if not reasonably attainable, then I would say, forsake all idea of pavement stone and accept the flattish rock formations of Nature instead. These, if more rugged of surface, will at least be less formal generally, while the interstices their irregular outlines afford will prove the best of abiding-places for the plants we have in mind.

The walks themselves—the stones—are, however, of fundamental importance. These constitute the setting, and the setting should be worthy of the gems: hence the need of a rightful conception

of the whole, so that the one may be truly wedded to the other, as though part of Nature's own. I have seen it otherwise—detected again and again in these matters attempts to wed May to December, with, as usual, the most disastrous results. I have also seen instances, even where the stones have been of the right kind, of that species of overplanting—it has its parallel in the over-jewelled fingers of the newly rich—which so crowds every crack and cranny with vegetable life as to make these pathways impossible or impracticable. There is no need for either. The preservation of the pathway as such is essential. It should never be nullified by foot-high plants at flowering-time, nor by others whose roundly cushioned tufts render high stepping or picking one's way necessary. These, indeed, are some of the things to avoid, some of the things

the more intelligently planted of these flagged ways there is no need for either, and the pedestrian should be able to pursue his way without regard to where the next step should be placed. In a word, though the selection of good plants is not large, there is enough for the purpose, ample to keep the central tread or the great proportion of the path quite free of large-growing things. In certain instances the sides of the paths or steps, should such exist, might be ornamented by some of the plants I have tabooed, using them in moderation, without attempting the herb garden in terrace walk or pergola path. Aubrietias and Mossy Saxifrages and their like in growth are too large, and they show to better advantage elsewhere.

Seeds of such things as *Erinus* and the miniature-growing *Dianthi*, among others, might be sown, though usually little bits of plants so inserted

THE DIANTHUSES OR PINKS.

(Continued from page 353.)

D. plumarius.—The wild form of the garden Pink, *D. plumarius*, has rose flowers and is single. There are, as is well known, many double varieties which please the grower of border flowers. At present we may draw attention to a number of beautiful single varieties for the rockery, the wall, or the edging. A packet of seeds will give many varieties, ranging from white to crimson, and many with deep-coloured zones. Named single varieties, such as *Beauty*, *Dove*, *Duchess of Fife*, &c., are very fine. *Cyclops*, which comes wonderfully true from seeds, is very showy.

D. Seguieri.—One of the Pinks which is best for rather large rockwork. It grows from 12 inches to 18 inches high, with two to four flowers together on the stems. They are pink, with a purple centre. It looks well near the top of a wall or on high rockwork. Flowers from June to August.

D. squarrosus.—This has clear lilac flowers on stems about a foot high, and, though not one of the best, is an easy *Dianthus* to grow almost anywhere. It has fringed petals, and flowers from June onwards.

D. suavis.—One of the *Dianthuses* which attract everyone by their habit and fragrance is *D. suavis*. It makes a close mat of small, grass-like leaves, which hang prettily over the stones, and are covered in the summer with a multitude of little, fringed, white flowers. Easy to grow.

D. subacaulis.—I have not grown this plant, which seems a good doer on the rockery. It has rose flowers on 6-inch stems, and makes a spiny-looking tuft of narrow grassy leaves.

D. superbus.—Unfortunately, not very long-lived as a rule, but pleasing all by its fragrant, whitish rose, deeply fringed flowers. It should be raised often from seeds, as it usually dies after flowering. It will grow almost anywhere. The flowers appear from May to August.

D. tener.—One of the prettiest of the small alpine Pinks, which has very small, cheery-looking pink flowers on stems of a wiry nature, and from 3 inches to 4 inches in height. It is good for a dry, gritty rockery or the moraine.

D. zonatus.—This is an easy plant to grow on the rockery or moraine. It comes freely from seeds, and can also be raised from cuttings. It has grassy leaves and large flowers of blush or pink with a dark zone. It varies slightly in colour from seeds, but is very easily cultivated in a light soil, and prefers lime. Flowers in the summer.

A number of other good, easily grown Pinks are sometimes offered. These include *D. furcatus*, *D. hirtus*, *D. intermedius*, *D. noeanus*, *D. pallens*, *D. pinifolius*, *D. pungens*, *D. sicutus*, *D. Simsii*, *D. tenuifolius*, *D. Waldsteinii* and *D. Wimmeri*.

Dumfries.

S. ARNOTT.

(To be continued.)



THE WILD FORM OF THE GARDEN PINK (*DIANTHUS PLUMARIUS*).

which, if thoughtlessly indulged in, make these pleasing phases of a garden less a pleasure than they might have been.

In the wayside cottage garden the chief garniture of these flagged ways is not infrequently moss, lichen, or indigenous *Spergula* or similar thing, and their dwarfness should prove an invaluable object-lesson to the gardener. It is another thing altogether, far beyond the limits of good taste, or taste at all, when one is confronted by *Corydalis*, *Candytuft*, Mossy Saxifrages in high mounded cushions, Lemon Thyme, foot-high *Campanulas* and *Dianthuses*, Rock Roses and others, through whose maze of tufts much steering is necessary to avoid them. In one instance I remember a party of visitors avoided the path and took to the adjoining turf, to the discomfort and annoyance of the owner. As a fact, however, pedestrianism in the ordinary way was a discomfort—I had almost said impossible. In

as to thread their way among the cracks of the stones will be found the better method for planting. Tufts of plants should never be inserted whole. The object is to garnish the sides of the stones, not to obliterate the latter from view; hence the value of "little bits" along their margins. The following are some good plants, though there is no pretension to a complete list: *Sedum corsicum*, *S. brevifolium*, *S. Lydium*, *S. hispanicum glaucum*, *Erinus*, *Linaria pilosa*, *L. hepaticæfolia*, *Dianthus cæsius*, *D. arvernensis*, *Thymus Serpyllum coccineum*, *Paronychia serpyllifolia*, *P. Kapela* (both ideal carpeters), *Leptinella scariosa*, *Mentha Requierii* (a veritable and fragrant gem), *Arenaria balearica* (preferably where it could climb steps or side walls), *Campanula pulla*, *C. pusilla* in variety, *Draba aizoides* (seeds or plants), *Helxine Solierolii*, *Acæna microphylla*, and *Antennaria tomentosa*, which is highly ornamental used in conjunction with red sandstone.

E. H. JENKINS.

SOME EASILY GROWN TULIP SPECIES.

COLOURED PLATE 1498.

UNTIL Mr. W. R. Dykes, of Iris fame, has completed his Herculean task of growing all the so-called species of Tulips from seed, we cannot say for certain of any Tulip, except a very few, "this is a species." This is the present state of our knowledge. Before the Neo-tulips of Italy or Savoy can be considered as having specific rank, we have "a deal to learn."

In these notes I use the term "species" in the old-fashioned, loose way, which, as we have no other at present, we must perforce stick to. I am sorry to say that I have to write in rather a pessimistic vein about the grand species which have come to us within the last two or three decades from Turkestan, Bokhara, Persia and elsewhere. Great hopes were raised at Wisley when *fosteriana* (immense scarlet) first bloomed. I remember so well Mr. S. T. Wright telling me that he thought it would be a good doer, and that his half-dozen bulbs had formed offsets. He has not mentioned *T. fosteriana* lately. Put what construction you like upon this silence, I feel sure that there are few, if any, gardens where *T. fosteriana*, *T. Eichleri* and, I may almost add, *T. Greigii*, really flourish. They may be kept alive, but that is all. It has been suggested that they are by nature a short-lived race and perpetuate themselves always in their own homeland by seed. They are, however, so magnificent that I plead for them as luxuries, just to be indulged in when one is "flush." All have large flowers and are of a brilliant shade of crimson or scarlet. *T. mauriana*, the lovely bright red with a pure yellow base, from Savoy, thrives and increases, and is one of the most brilliant of all Tulips; but is it a true species? The Bokharian *præstans* is a bright vermilion, base and all, and has several flowers on a stem. It is the best doer of what I venture to call the true large red species type. I have seen it grow fairly when left for two

or three years in light soil, and with lifting it every year myself in my heavier land I am able to keep it. *Kaufmanniana* (the Water Lily Tulip), usually a pale primrose, although there are bright red and deep yellow forms, can usually be relied upon. It flowers in early spring and seems quite at home in our gardens, although it is not a very rapid increaser. The smaller Tulips, as a rule, behave better. *Clusiana* and *Batalinii* certainly do, and they may be established on a rockery where they will get a good resting-place in summer. *Chrysantha* I have not grown myself, but I am told it is not such a good doer as the others. *Dasystemon* is the most satisfactory of all. It is a very dwarf

grower, and generally has more than one flower upon a stem; good, strong bulbs ought to throw three or even four. The exterior of the blooms is a sort of green, while the interior is pure white with a large yellow base. *Clusiana*, or the Lady Tulip, is very pleasing; it has bright rosy red marks on its external petals and a claret-coloured base. *Batalinii* is a sort of first cousin to the brilliant *linifolia*. I am told they come from different valleys in Central Asia, and that various gradations in colour are to be found among them. Mr. E. A. Bowles has two or three very pretty varieties in the rockery at Myddelton House. I do not think they increase, but they come up

chrysantha, *persica* (small, dwarf deep yellow) and the Algerian *primulina* (yellowish white)—are *Didieri* (pointed, crimson), *Didieri alba* (pure white) and *Marjoletti* (pale yellow, with rose blotches at the base of the petals). These may all be usefully used in suitable positions in rockwork, and in light soil will probably take care of themselves. *T. Sprengeri* seems to stand in a class by itself. It is very late in flowering and of a bright scarlet colour. I find this goes on for some years without being much the worse, and as it is a valuable addition to the summer flora at a rather sparse time, it is one that should be tried. I recommend it for clumps in borders. It seeds freely; in fact, most of the species do. Seeds readily germinate, but the lengthy period of waiting is deterrent. However, like it is with Daffodils, once the first weary wait is over, if the sowing is annual, a regular succession of seedlings may be kept up.

JOSEPH JACOB.

[We are indebted to Messrs. Barr and Sons, King Street, Covent Garden, W.C., for the flowers of the interesting Tulip species from which our coloured plate has been prepared.—ED.]



DIANTHUS DUCHESS OF FIFE IN THE ROCK GARDEN.

yearly and do not die. *Chrysantha*, if I remember rightly, was shown last spring by Messrs. Barr and Sons. It is a pretty red and yellow, and is well worth a trial, although I cannot say much about it from personal experience. Sir J. D. Hooker, in his "Flora of British India," says the bulbs are eaten in Baluchistan. It takes one back to those first planted in Holland in 1571. The Dutch in those days thought they had got hold of something to eat, and the first Tulips were promptly planted in a kitchen garden.

Three lovely and dainty Tulips which might be added to the above—*clusiana*, *Batalinii*, *linifolia*,

In the meantime any amateur who can spare a small propagating-frame in his greenhouse would do well to strike a few of such Roses as he finds difficult to grow in the ordinary way.

The other fine climber I should like to direct attention to is *Souvenir de Mme. Joseph Metral*. For size of bloom it has no equal. The flowers are very double, of grand exhibition shape and of a lovely cherry red colour, shaded crimson and vermilion. The Rose may be grown as a free bush, but its flowers need support, as they are so heavy. It is fine on a south or west wall, and would also make an excellent standard.

DANECROFT.

SWEET PEA NOTES.

Summer Treatment and Exhibiting.—By the time these notes appear, the Sweet Pea enthusiast will be either rejoicing in a display of magnificent flowers and eagerly anticipating the near approaching floral contests, or he is miserably disappointed by dire failures. In this latter case, rarely does he assign the blame to the right cause. Seldom will a grower admit that his ignorance or careless neglect has been mainly the cause of his unlucky disaster. Yet in the few instances of partial or total failure I have met with this season, almost every one could be attributed to the fact that the grower (neglecting the warning so oft repeated in these columns) made the mistake of working and preparing his soil when in an unfit condition; consequently, the drought, succeeding the very wet weather of March, baked his soil into huge, solid lumps, in which it was impossible for the Sweet Peas to grow. On the other hand, in the majority of gardens the Sweet Peas are better than they were last year.

Increased Popularity is evidenced by the number of extra classes one finds devoted to

his Sweet Peas well into bloom by the latter week of June, and then maintaining a succession of flowers well into the autumn. To attain this, the plants must be kept in a growing state. No seed-pod must be allowed to form, and all malformed flowers should be rigidly cut off. Give a syringing frequently to prevent the hardening and drying of the haulm, and applications of liquid manures (a little and often) will ensure the plants growing well into the autumn. Nitrate of soda and sulphate of ammonia sprinkled upon the soil (about an ounce to the square yard) before watering will materially help to promote new growths after several pickings have been taken. I have by these means often picked fine blooms in October from plants that commenced flowering early in July.

Exhibiting.—I have often felt that it is one thing to have first quality Sweet Peas growing in the garden, but a totally different thing to so stage them at an exhibition that they win the merited award. What is the reason for this? In the first place, too many exhibitors make the fatal mistake of attempting too much. Often have I advised would-be exhibitors to content

digested. If compelled to use a weak blossom, do not conceal it. The judge is sure to "spot" it, and then follows a closer scrutiny. Unless the rules compel a fixed number, use fewer sprays rather than stage weak ones. Finally, look at the National Sweet Pea Society's Too-much-alike List and do not stage synonymous varieties; do not neglect to correctly label your exhibits, and be sure to read the schedule of the show and obey the rules.

S. M. CROW.

NEW ROSES AT THE "NATIONAL" SHOW.

THERE was nothing very startlingly new at the National Rose Society's show held on Tuesday of last week, and a report of which appears on another page. At the same time, there were a number of very good seedlings shown, and the following received awards from the judges.

Augustus Hartman.—A seedling Hybrid Tea of vigorous habit with stout, bushy stems. Said



Mrs. Bertram Walker.



Margaret Dickson Hamill.



Augustus Hartman.

THREE GOLD MEDAL ROSES.

Sweet Peas in the schedules of the summer shows. Also one could not help feeling a throb of pleasure as one stood on a railway terminus station in London a few days ago and saw the number of people either wearing a button-hole of Sweet Peas or carrying bunches of them. The National Sweet Pea Society has accomplished a grand work, and at its show on July 16 at Westminster will be seen all the choicest and newest Sweet Peas, and no lover of this flower should miss this opportunity of seeing them.

Summer Culture.—During dry weather continue to give a thorough soaking twice or thrice a week, alternating with a good hoeing. After several pickings have been made, the plants require a restorative and a stimulant; therefore give either liquid manure or any of the prepared foods as recommended in my previous notes. Also remember that a mulch of well-decayed manure or spent Hops adds extra nutrition and materially helps to prevent loss of moisture.

Extension of Flowering Period.—Every grower, except he be a seedsman, should aim at getting

themselves with a six class rather than put up a weak dozen. It is true this advice has frequently been coldly received, oftentimes rejected. Yet I am convinced that it is a mistake to try too large a class, or to show in too many classes. Secondly, many exhibitors fail to recognise the superiority of a fresh Air quality three-flowered spray over a coarse, faded four. But such is a fact. Do not stage a weak four if you have an excellent three bloom spray. Again, it is essential that the exhibitor who means to have the premier award stages only those varieties that will successfully withstand the vitiating atmosphere of the show tent, and this knowledge can only be obtained by experiment, noting the behaviour of each variety (1) during transit, (2) in water, (3) in a hot, humid or dry atmosphere, and (4) in a draught. Of course, this entails a fair amount of labour and trouble, but it means all the difference between an honour or a blank; therefore know your Sweet Peas. Other points were fully dealt with in last week's issue (page 351) by Mr. Thomas Stevenson, whose advice should be carefully considered and

to be perpetual flowering and good for exhibition or bedding. The blooms are large, deep and slightly conical in the centre, the individual petals being very large. The colour is rich glowing vermilion scarlet, reminding us in this respect of George C. Waud. The fragrance, though not powerful, is very pleasing. Shown by Messrs. B. R. Cant and Sons, Colchester. Gold medal.

Margaret Dickson Hamill.—A seedling Hybrid Tea, good for exhibition or bedding. The plant as shown has a very branching habit and spiny stems, but the blooms are not too erect. They are of good size and substance, fairly full and slightly conical. Colour, yellow, flushed with apricot. Not very fragrant, though slightly Tea-scented. Shown by Messrs. Alex. Dickson and Sons, Hawlmark, Newtownards. Gold medal.

Clytemnestra.—A seedling Hybrid Tea suitable for garden purposes and said to be perpetual flowering. A cluster Rose, the blooms being produced in large trusses. The open flowers are of ragged shape and of blush white, flushed



AN EFFECTIVE VIEW IN A READER'S GARDEN.

apricot colour. Shown by the Rev. J. H. Pemberton, Havering-atte-Bower. Gold medal.

Majestic.—A seedling Hybrid Tea of vigorous, upright habit with stout, spiny stems. The flowers are large, deep, of good substance, slightly conical in shape, and very sweet scented. The colour is glowing soft vermillion pink. Shown by Messrs. William Paul and Son, Limited, Waltham Cross, Herts. Gold medal.

Mrs. Bertram Walker.—A seedling Hybrid Tea of erect branching habit, and said to be perpetual flowering. The flowers are borne on stout, erect stems, and are of medium size, have plenty of depth and substance, and are of rather conical habit. The colour is a glowing cerise pink. Shown by Hugh Dickson, Limited. Gold medal.

Mrs. Maud Dawson.—A large Hybrid Tea seedling of branching, dwarf habit and evidently free flowering. Said to be good for bedding or exhibition; certainly it will be excellent for the latter purpose. The blooms are very full and conical, and leave nothing to be desired in shape. Colour, deep bright crimson. Very fragrant. Shown by Messrs. Alex. Dickson and Sons, Hawlmark, Newtownards. Silver-gilt medal.

Dorothy Varden.—A hybrid rugosa, making a large shrub or bush 4 feet to 5 feet high and said to be perpetual flowering. The blooms are freely produced, semi-double and slightly fragrant. The half-open flowers are glowing apricot salmon pink, changing to a much paler shade as they age. Shown by Messrs. George Paul and Sons, Cheshunt. Certificate of merit.

Mrs. Arthur Bide.—A seedling Hybrid Tea, the result of a cross between Mrs. T. W. Massey and Souv. de Catherine Guillot. Habit vigorous and branching, and said to be perpetual flowering. Might be aptly described as a double Irish Elegance. Only slightly fragrant. Shown by Messrs. A. Bide and Sons, Limited. Certificate of merit.

WATER AND ROCK- WORK IN A SMALL GARDEN.

THE small pond shown in the illustration is a very effective feature in a little villa garden of the usual rectangular type.

On three sides it is surrounded by rockwork facing south-west. At the very top a Clematis (*Viticella*) is planted and trained over trellis-work. It has to be vigorously cut back below, or it would soon smother the whole rockery. At its foot is a small Gorse bush, which flowers intermittently, as it does on our commons. "When the Gorse is out of bloom, kissing's out of season." A little lower there are, to right and left, patches of purple Aubrietia, and, contrasting well with its fine glaucous "grass," a tuft of Pinks. Among and between these are Daffodils; the flowers were just over and cut when the photograph was taken, but the long leaves show plainly. There is a big patch of *Iberis sempervirens* (perennial Candytuft) in full bloom in the middle of the picture, and just above, and to the left, a strong clump of the wild yellow Iris of our English

brooks. It is in flower in June, and the seed-vessels are very decorative later on, though, if left, they scatter much seed, and a careful removal of seedlings is necessary. To the right, above the Iris, is the old familiar double white Arabis, tumbling down that side of the rockery like a sheet of snow. I cut it well back after flowering, as it is a great invader. At the right edge the leaves of a pale blue (Kelway) Larkspur can be seen.

The water is just below the large Iris group; but an Iris with very narrow leaves and veined purple flowers in June, planted at the near edge, hides much of it. Some plants of *Leucojum vernum* are in flower a little to the right of the Iris, and then the dark red, early growths of a very fine *Astilbe rivularis*, a sort of giant and hardy *Spiraea*, fill up the space to the edge. They grow 2 feet or 3 feet high, are very much divided and graceful, and the flower rises to 5 feet—a great toss of creamy inflorescence in summer. In front, to the right, is a clump of self-sown *Solidago* (Golden Rod) that will grow too tall and must be eliminated, and it joins on to a large piece of Cone-flower (*Rudbeckia*), which flowers in autumn. It is also too tall when fully grown, and should have a place elsewhere, as it hides the water. Then, very much mixed up together, but all thriving on the steep slope, are Wallflowers, spring Forget-me-nots (removed when out of bloom), *Sedum rupestre*, London Pride and a white-flowered Carnation. The *Sedum* (rosy purple) flowers from September right on till November. A tiny, low-growing *Campanula* (*pumila alba*) lies like moss on the ground to the extreme left. Hardly visible, there is also a great deal of *Myosotis palustris*, the summer-flowering Forget-me-not, which begins to bloom in June, and has large, handsome flowers.

The Water Lily, shown in the other illustration of the surface of the pond only, is *Nymphaea Helvola rosea*. The leaves are coppery and quite small, but the flowers are a good size and have deep rose centres and yellow stamens. It flowers well, but would not do so if the surrounding plants overshadowed it, and that is one reason why only low-growing plants should be to the south of the pond side. The handsome leaves of a *Funkia*, growing under the *Astilbe*, are also visible in this picture, and the leaves of an ornamental striped grass. Between them and the Iris, the flat, disc-like leaves of Kingcups (*Caltha palustris*), may be noticed. There is a Water Plantain also in the pond, but it does not show, nor a piece of Buckbean I have lately introduced. M. W. S.



WATER LILY POOL IN A VILLA GARDEN.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Grapes which are quite ripe will require some protection from sun, in order to keep them in good condition for as long a time as possible. If ordinary garden nets are available, they will answer the purpose well, as besides shading the ripe Grapes they will be the means of preventing birds from entering the vineries and picking the berries. Ventilate freely, and only employ sufficient fire-heat to dispel moisture during damp weather.

Strawberry Plants for early forcing should be potted into 6-inch pots as soon as ready. Wash the pots and crocks before they are used, and make the soil firm without breaking the small ball of soil. Turfy loam, with a small quantity of decayed horse-manure, will suit them well. A sprinkling of bone-meal mixed with the soil will be an advantage. After potting, the plants should be placed in a shaded position and syringed twice daily while dry weather lasts.

The Flower Garden.

Pentstemons.—These plants are pushing up their flower-spikes, and should be encouraged by frequent applications of clear water at the roots. Keep the surface soil stirred with the Dutch hoe, and secure the flower-spikes to neat sticks before they are injured by rough wind.

Carnations.—Border Carnations will now require attention to tying up the flower-spikes. Keep the Dutch hoe at work among the plants, and if dry weather continues, give a good watering of clear, soft water. The layering of next season's plants should be accomplished as early as possible, in order to allow the young plants to become established in their flowering quarters before the season is too far advanced.

Sweet Peas.—These plants must receive a liberal supply of moisture at the roots during dry weather. Manure-water from the farmyard may be freely applied, but never of sufficient strength to injure the young roots. If decayed manure is available, a good mulching should be given previous to a soaking of clear, soft water. As the flowers die off, the seed-pods must be removed, in order to prolong the flowering period. Keep the stems close to the supports, so that the leading shoots may always grow in an upright direction. Weak soot-water is an excellent stimulant.

Spring-flowering Plants, such as Wallflowers, Myosotises, Polyanthuses and Violas, which have been raised from seed should now be ready for pricking off. This must be carefully performed, and the plants watered before they have time to flag. Frequent damping will be necessary until the plants become re-established.

The Rock Garden.

Watering.—Plants in exposed positions must receive careful attention to watering, which should be applied through a fine rose, so that the soil may not be washed from its position. Cut over all plants as they pass out of flower, and proceed with the propagation of young stock for spring planting.

Alpine Poppies.—These, *Papaver alpinum*, are now flowering freely, and present a very attractive appearance in the rock garden. They are easily raised from seed, which may be sown now to produce plants for flowering next season.

Auriculas.—Spring-sown seedlings should now be potted singly in small, clean pots and encouraged to grow freely. Care must be taken to protect the young plants from sun. Repotting of old stock should be carefully attended to, and the small offsets of choice varieties be placed under a hand-light, where they are almost certain to take root.

The Hardy Fruit Garden.

Young Fruit Trees which were planted in spring must be well supplied with moisture at the roots during dry weather, and, if not already done, a mulching of farmyard manure should be applied at once. Syringe the trees as often as circumstances will permit, either in the early morning or evening. Young trees planted against south or west walls must have daily attention in this matter, or they may suffer seriously and become permanently stunted.

Raspberries.—The crop is ripening fast, and should be secured as soon as ripe and per-

fectly dry for preserving. Fruits required for dessert should be carefully netted, and if protection from strong sun can be provided, so much the better. If the shoots have grown freely, they may be tied in such a way as to partly shade the fruits without making the covering too dense. When the crop has been gathered, all the old fruiting stems should be removed and the young shoots secured to wires or sticks. Four or five good strong shoots will be sufficient for each plant, as overcrowding must be avoided if good results are desired.

The Kitchen Garden.

Celery.—The principal plantation of Celery should now be finished, and if dry weather prevails, the plants must receive constant attention to watering. Earth up the early plants as soon as large enough, taking care to keep the hearts of the plants quite free from soil.

Leeks.—Plants intended for winter use must now be put in drills 18 inches apart and 12 inches between the plants in the row. Plants intended for large specimens should now be ready for earthing up. This must be done several times during the season. The Leek is a gross feeding plant, and will repay the cultivator for liberal treatment. Water freely with liquid manure. Soot-water is also a good stimulant for this crop.

Parsley for winter supplies ought to be sown as early in the month of August as possible. When the crop has grown a few inches high, the plants should be cut close to the ground, so that a quantity of sturdy leaves may be produced, as these will stand the winter better than long, spindly growth. If a cold pit is available, the seedlings may be thinned out and transplanted into the cold pit for use in rough wintry weather.

Endive.—The principal sowing should now be made and the plants thinned and transplanted. As soon as ready, some part of this plantation may be made where protection can be given during winter.

French Beans.—These should now be planted in cold pits for use during October. Plant in rows 2 feet apart, and keep the lights off until the approach of frost.

Globe Artichokes.—Give liberal waterings of liquid manure, and cut as soon as large enough, whether they are required for use or not.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Watering.—The heavy rains which fell in many parts of the country during the latter part of June were the means of saving many of the vegetable crops, which had been suffering severely. They will now be growing freely, and with many of the choicer vegetables, such as Peas, Celery and Cauliflower, occasional waterings with liquid manure will be very beneficial. If this cannot be secured, good results may be had from sulphate of ammonia at the rate of an ounce to the gallon of water, or, if used in a powdered state, an ounce to the square yard would be sufficient.

Late Peas.—The latest-sown Peas will require special attention just at present, as, if allowed to become dry, the crop is more than likely to end in failure. If manure can be had, it will be well to spread some on each side of the row, afterwards giving a plentiful supply of water, which will ward off attacks from mildew.

Small Salads.—Continue to make a small sowing of Radish once a fortnight, and for Mustard and Cress a sowing may be made once a week.

The Flower Garden.

Wallflowers.—The young seedlings should now be ready for pricking out, as, unless they were very thinly sown, the young plants soon become drawn and spindly. Prick out in soil of a free-rooting medium made moderately firm, about 3 inches apart and 9 inches between the rows; at least, a sufficient width to allow the hoe to ply between them. The aim should be to build up nice sturdy little plants that will withstand severe winter weather.

Roses.—The season so far has been favourable to Rose-growers, although some of the varieties have been more or less attacked by mildew,

which not only renders them unsightly, but has a very weakening effect on the plants. I find most of those affected have suffered from dryness at the roots. Now that many of the earlier blooms will be over, the faded flowers should be picked off and the shoots slightly shortened. They will be the better for liberal applications of liquid manure, or, failing that, some approved Rose manure. I have used fish manure with very good results.

Spring Bedding Plants.—A number of those sown last month should be almost ready for pricking off, and, as in the case of most plants that have to stand the winter, it is of the utmost importance to have them well rooted.

Codonopsis ovata.—This plant, with its strikingly beautiful blooms, will now be going out of flower, and the flower-stems should be shortened to induce it to break into growth again. Perhaps its proper position is in the wall garden or hanging over stones in the rockery, where the beauty of its flowers can be better seen. It is an old-fashioned plant, but one that is well worth a place in any collection.

Plants Under Glass.

Cyclamen.—The most forward of the old plants will be rooting freely, and will be greatly assisted with an occasional watering with soot-water, which I find not only strengthens the foliage, but also tends to keep the soil sweet. Admit air freely now, and on fine nights the lights may be drawn down, when the plants will derive much benefit from the evening dews. Seedlings from last August sowing should be ready for potting on into 6-inch pots. After potting, keep them close for a time, syringing twice daily.

Poinsettias.—By this time all the young plants should be rooted, and the most forward ready for potting on into 4-inch pots. As soon as they have taken to the new soil, expose them to sun and air, so as to encourage a sturdy growth.

Show Pelargoniums.—Those plants that have flowered and have been placed in frames or outside should now be sufficiently ripened so that they may be cut back and placed in frames till growth commences. After this they may be shaken out and repotted. Replace them in frames and water very carefully for a time; indeed, a syringing twice daily will keep them moist enough for a week or so.

The Hardy Fruit Garden.

Strawberries.—No time should be lost in securing runners for planting either in the autumn or the following spring. If suitable ground were available, they could be planted right away. Where, however, this is not possible, they may be run into nursery lines in a well-prepared border, and, should the weather be dry, they will require copious supplies of water from time to time.

Wall Trees.—The heavy rain experienced in many districts some weeks ago has had a very beneficial effect on all wall fruit trees. Not only has it cleansed the foliage of insect pests, but it has caused the fruit to swell nicely. Attention must be paid to stopping the shoots and laying in those required to furnish the walls. The regulation of shoots on Morello Cherries should be seen to at once, and protect the fruit with nets without delay.

Fruits Under Glass.

The Orchard-House.—Pot trees will require very careful attention now, particularly those approaching the ripening stage. In the case of the latter, artificial feeding should be discontinued, as well as the use of the syringe. Apples and Pears should have their fruits supported with raffia, and in the case of the former the pots should be plunged in ashes out of doors to finish the colouring of the fruits. A temporary erection should be put up, over which a net can be thrown to protect the fruits from birds.

Melons.—Young plants raised from seed, which in most cases will form the last batch should be planted out without delay. I find it useful to put a few plants in large pots and grow them in odd corners, and from these a serviceable supply of fruit can always be depended on. For this late batch the leading shoot should be stopped at about three feet, to induce the plants to throw out laterals more quickly.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

ANSWERS TO CORRESPONDENTS.

MISCELLANEOUS.

ROSES FOR TERRACE WALL (M. M. C.).—As you desire Roses to fall over the top of the 10-foot wall, you need varieties that have somewhat pliable growths. We think the following dozen would meet your requirements: Pale pink—Lady Godiva, Ethel, Grafen Ada Bredow and Débutante. Medium pink—Dorothy Perkins, Gerbe Rose, Coquina and Grafen Chotek. Deep rose—Minnehaha, Lady Gay, Climbing C. Testout and American Pillar.

PLANTS FAILING (Miss C.).—The Achillea appears to have been affected either by drought or fungus, which, we are unable to say, owing to the advanced stage of decay. The Inula is teeming with myriads of insect life, green fly particularly predominating and in sufficient numbers to undermine the constitution of any plant. Syringe the plants with a paraffin and soft soap emulsion, or, now that they have flowered, cut them down and burn the tops. The Violas may have been affected by drought, but we could not say without knowledge of the circumstances under which they have been grown.

NAMES OF PLANTS.—H. H. G.—The Clematis is a variety of *C. lanuginosa*.—*H. French*.—*Deutzia crenata* flore pleno; not an evergreen.—*McH. D.*—The Rose is Veilchenblau, known also as the Blue Rambler.—*Pinkieburn*.—Roses: 1, Souvenir de M. de Zayas; 2, Mme. Lambard; 3, Dean Hole; 4, Souvenir de W. Robinson; 5, Ulrich Brunner; 6, Mrs. S. Clark; 7, Mme. J. Grolez; 8, Admiral Dewey. As you sent no wood or foliage, it is impossible to say definitely what they are.—*Stoke*.—1, Alfred Colomb; 2, not identified; 3, Victor Hugo; 4, George C. Waud; 5, Mme. Ravary.—*J. H. W.*, *Manchester*.—*Hemerocallis fulva*.—*Bridport*.—*Sidalcea candida*.—*Avon*.—*Oxalis floribunda*; 1, *Philadelphus coronarius*; 2, Rose Gloire de Dijon.—*W. B.*—*Verbascum Chaixii*.—*Dandelion*.—1, *Campanula rapunculoides*; 2, *C. patula*; 3, *C. pusilla*; 4, *C. portenschlagiana* (quite hardy); 5, *Crepis rubra alba*; 6, *Calamintha Acanthos*.—*Mrs. F. F.*—1, *Sedum acre*; 2, *S. a. maweanum*; 3, *S. sexangulare*; 4, *S. asiaticum*.—*E. B.*—1, *Polygala vulgaris*; 2, *Alchemilla vulgaris*; 3, *Campanula rotundifolia*; 4, *Marchantia polymorpha*; 5, *Cystopteris fragilis*; 6, *Asplenium Ruta-muraria*.—*G. C.*—All three seedling forms of *Dianthus plumarius*.—*A. B. Bassett*.—1, *Juniperus virginiana aurea variegata*; 2, *Sequoia gigantea*; 3, *Juniperus chinensis* variety; 4, *Ailantus glandulosus* (Tree of Heaven); 5, *Populus marylandica*; 6, *Abelia rupestris*.—*J. H.*—1, *Kalmia latifolia*; 2, *Zenobia speciosa*; 3, *Rhododendron ferrugineum*; 4, *Kalmia angustifolia*; 5, *Leycesteria formosa*; 6, *Prunus Lauro-cerasus parvifolia*.

OBITUARY.

GEORGE CUTHBERT.

It is with deep regret that we record the death, on July 8, of Mr. George Cuthbert, head of the old-established firm of Messrs. R. and G. Cuthbert, The Nurseries, Southgate, Middlesex. Mr. G. Cuthbert was in his seventy-fifth year, and passed away after a short illness. He was well known in horticultural circles, and until recently was present at the fortnightly meetings of the Royal Horticultural Society. He was ever ready to assist the gardening charities, and his genial and generous nature endeared him to a wide circle of gardening friends. He was one of the oldest supporters of the Gardeners' Royal Benevolent Institution; indeed, the firm of which he was the head contributed to the funds of this admirable institution from its commencement. The interment took place at Christ Church, Southgate, on July 11.

Sutton Rose Society.—The thirty-third exhibition of this society was held at the Public Hall on Saturday, the 4th inst. The entries were not quite up to the numbers of former years, which is partly accounted for by Purley Show being held on the same day. It is a pity some arrangement cannot be made between secretaries to avoid this clashing of dates. The Sutton Challenge Cup, for forty-eight distinct varieties, was won by Messrs. F. Cant and Co., Messrs. D. Prior and Son being second and Messrs. Harkness and Co. third. In the open amateur classes, Dr. C. Lamplough again won the Vice-President's Cup, and Mr. J. Smart, jun., the Visitors' Challenge Cup. The local classes were well patronised.

SOCIETIES.

NATIONAL ROSE SOCIETY'S SHOW.

THIS society's thirty-eighth annual show of Roses was held in the Royal Botanic Gardens, Regent's Park, on July 7. From the exhibitor's point of view the show could hardly be described as a success, owing to the damage caused by the recent bad weather. In the amateurs' classes particularly, many of the blooms staged were unmistakably weather-beaten. The interest displayed in new Roses appears greater than ever, if we may judge by the long queues which besieged the seedling and new Rose tent throughout the afternoon. Descriptions and illustrations of some of the new Roses will be found on pages 368 and 369.

NURSERYMEN'S CLASSES.

There were six competitors in Class 1, for seventy-two blooms, distinct varieties. Messrs. B. R. Cant and Sons, Colchester, were the winners of the first prize, and hold for the year the Nurserymen's Champion Challenge Trophy and, consequently, become the champion Rose-growers among nurserymen for 1914. The blooms were on the small side, but perfectly fresh, glorious in colour, and even throughout. Second, Messrs. R. Harkness and Co., Hitchin; third, Messrs. Frank Cant and Co., Colchester; fourth, Messrs. D. Prior and Son, Colchester. Mr. John Pigg proved the winner of the first prize in Class 3, and in consequence holds the China Challenge Trophy for the year. The class is for forty-eight blooms, and among the pick of them were Mrs. Joseph H. Welch, George Dickson and Mme. Jules Gravereaux. Second, Messrs. G. and W. H. Burch, Peterborough; third, Mr. G. Prince, Longworth.

Messrs. B. R. Cant and Sons were again first for forty varieties, three blooms of each, their best trios being Ben Cant, Juliet, George Dickson, J. B. Clark and Edward Mawley; second, Messrs. D. Prior and Son, Colchester; third, Messrs. Frank Cant and Co.

A new class for twenty-four varieties, three blooms of each (Class 4), brought good competition. Messrs. G. and W. H. Burch were first, showing Elizabeth, Ulrich Brunner and Mrs. John Laing in capital form. Messrs. Burrell and Co., Cambridge, were a good second.

Another new class, for twelve varieties, three blooms of each, was won by Messrs. Chaplin Brothers, Limited, Joyning's Nursery, Waltham Cross. Caroline Testout and Florence Pemberton were well shown. Mr. C. Green, Hitchin, was second with a far inferior set of blooms.

The nurserymen's championship for Tea Roses (Class 7) and the D'ombain Cup were this year won by Mr. H. Drew of Longworth, Mr. George Prince being second, Messrs. D. Prior and Son third. Mr. Drew is to be congratulated on his success in this class, his best varieties being Mme. Jules Gravereaux, W. R. Smith, Maman Cochet, White Maman Cochet, Bridesmaid and Mrs. Myles Kennedy. Mr. Drew was also first in Class 9, for sixteen Tea Roses, three blooms of each.

For twelve Tea Roses, distinct, Mr. John Mattock had the best blooms. Molly Sharman Crawford, Mrs. Foley Hobbs and Mrs. Myles Kennedy were particularly well shown.

Messrs. W. Spooner and Sons were first in Class 18, for twelve varieties of summer-flowering decorative Roses (those which bloom only once in a year). *Rosa moschata alba* and *R. macrantha* were, perhaps, the pick of the twelve.

Mr. J. Mattock was first for twenty-four blooms, distinct varieties (Class 55), in very keen competition. Mr. C. Turner, Mr. C. Green, and Messrs. W. Crisp and Sons followed in the order named.

For twelve varieties, seven blooms of each, shown in vases, Messrs. D. Prior and Son were first. No other prizes were awarded in this class.

Mr. H. Drew was first in a similar class for nine Tea Roses, seven blooms of each, Messrs. D. Prior and Son being a good second.

The classes for perpetual-flowering decorative Roses were, speaking generally, very well contested, and these classes added in no small measure to the brilliance of this very large exhibition.

Roses shown in baskets were particularly effective, and the society does well to encourage, as far as possible, this effective mode of showing Roses.

For nine different varieties of Roses, shown in nine baskets, Messrs. Hugh Dickson, Limited, were first, thereby gaining the Kilbee Stuart Cup. Messrs. Chaplin Brothers, Limited, and Mr. W. Easlea were second and third respectively.

A similar class to the foregoing, only for five baskets, was won by Mr. H. Drew, followed by Mr. G. Prince and Messrs. S. Bide and Sons, Limited.

Another class in which eighteen varieties were shown in eighteen vases was won by Mr. C. Turner; while a similar class, only for nine varieties, was won by Mr. E. J. Hicks.

Messrs. Hobbies, Limited, were first for a magnificent group of Roses arranged on the floor of the tent. Messrs. William Paul and Son, Waltham Cross, were second, and Messrs. Paul and Son of Cheshunt were third. Weeping standard Roses of such varieties as *Hiawatha* and pillars of White Dorothy Perkins, together with good baskets of cut Roses, formed the leading features of these groups. The first prize group, it should be added, was one of the largest and most important exhibits in the show.

The Royal Botanic Society's Cup, for a group of cut Roses arranged on the staging, was won by Mr. F. M. Bradley of Peterborough. His blooms of *Maréchal Niel*, *G. C. Waud* and *Avoca* added considerably to the brilliance of his exhibit.

Messrs. G. Jackman and Son of Woking were first in a similar class. Among the varieties which adorned their stand were Mrs. Alfred Tate, Lady Pirrie and Countess of Gosford.

Messrs. Frank Cant and Co. were very successful with decorative Roses, gaining the A. G. Turner Cup and premier awards in three of the leading nurserymen's classes.

OPEN CLASSES.

The following classes were open to both nurserymen and amateurs: Twenty-four blooms, twelve blooms of a white and twelve of a crimson Rose. First, Messrs. W. and J. Brown, who staged capital blooms of Mrs. Carnegie and George Dickson. Messrs. B. R. Cant and Sons were second, and Messrs. Frank Cant and Co. third, the former showing Bessie Brown and Gloire de Chedane Guinoisseau, and the latter Frau Karl Druschki and George Dickson.

Eighteen Hybrid Perpetuals shown in a basket: This class brought to light one of the finest features of the exhibition, namely, a basket of eighteen Frau Karl Druschki, staged by Messrs. Prior. Messrs. Stuart Low and Co. were second for a very beautiful variety named Mrs. Charles Russell. No doubt we shall hear more of this variety as it becomes better known. Third, Messrs. Frank Cant and Co. for Ulrich Brunner.

For eighteen blooms of any Rose other than Hybrid Perpetual or Tea, Messrs. J. Cocker and Sons were first for Mrs. Andrew Carnegie, a variety that aroused great enthusiasm from all who saw it. Mr. W. R. Hammond, Burgess Hill, was second with Dean Hole. The class for eighteen Tea Roses shown in a basket was won by Mr. J. Mattock with Mme. Jules Gravereaux.

In a class for Rayon d'Or, shown in a basket, Mr. George Prince was a good first. Messrs. H. Dickson, Limited, were second and Messrs. S. Bide and Sons third. Messrs. J. Cocker and Sons were first for nine blooms of any new Rose, again showing Mrs. Andrew Carnegie in capital form.

Messrs. A. Dickson and Sons, Limited, were first for twelve new Roses; their varieties included H. V. Machin, Mabel Drew, Mrs. Cornwallis West and Duchess of Sutherland.

The dinner-table decoration, in which any member of the society could compete, was won by Mrs. A. R. Bide, who staged a particularly attractive table with the variety Mme. Herriot. Mr. E. J. Hicks was first for a bowl of Roses with his new variety Princess Mary. Mrs. A. R. Bide was second with the beautiful single variety Charles Ingram.

PREMIER BLOOMS.

Nurserymen.—Best Hybrid Tea, British Queen, from Mr. George Prince of Longworth; best Hybrid Perpetual, Horace Vernet, Messrs. B. R. Cant and Co. of Colchester; and best Tea, Mrs. Foley Hobbs, Mr. J. Mattock of Oxford.

Amateurs.—Best Hybrid Tea, Yvonne Vacherot, from Mr. R. de V. Pryor of Hitchin; best Hybrid Perpetual, Gloire de Chedane Guinoisseau, Mr. E. B. Lehmann of Crawley; and best Tea, Mrs. Foley Hobbs, Mr. C. Lamplough of Alverstoke.

AMATEURS' CLASSES.

The amateur champion class, for thirty-six blooms, distinct varieties, was represented by only three exhibits, the coveted distinction falling to the lot of Mr. T. E. Pallett, Earl's Colne, Essex. There were some very beautiful flowers, notably White Maman Cochet, Mrs. A. E. Coxhead, Mrs. Cornwallis West, Mildred Grant, Gloire de Chedane Guinoisseau, Princesse Marie Mertchersky, Frau Karl Druschki, Avoca, Hugh Dickson, Elizabeth, Maman Cochet, Dr. O'Donel Browne, George Dickson (grand), Florence Pemberton, Mrs. Stewart Clark, Mme. P. Euler, J. B. Clark (grand) and Mrs. Joseph H. Welch. A poor second was found in Mr. Conway Jones, Hucclecote, Gloucester. A less attractive series won third prize for Mr. W. Boyes, Middleton-on-the-Wolds, Yorkshire.

Class 38, for twenty-four blooms, distinct, was represented by only one exhibit, this being awarded first prize, and was shown by Mr. Conway Jones. The blooms were bright and attractive, though distinctly small. Ulster, Duchess of Bedford and Star of Waltham were the best blooms.

There were no entries in Class 39, for twelve blooms, distinct varieties, and only one exhibit in the class for twelve blooms of any Rose except Tea or Noisette. The prize in this class was offered by Messrs. Thomas Rivers and Son, The Nurseries, Sawbridgeworth, Herts. The variety shown was Mildred Grant, and the flowers were beautifully even and of good form and colour. The prizewinner was Mr. T. E. Pallett, who well deserved the distinction.

Open to Growers of Fewer than 3,000 Plants.

Four entries were forthcoming in the class for twenty-four blooms, distinct, in competition for the Hobbies Cup. A bright, clean lot of blooms won first prize for Mr. W. O. Times, Bedford Road, Hitchin. Beautiful examples were Mrs. Stewart Clark, Horace Vernet (charming), Marquise de Ganay, Hugh Dickson, Mrs. Foley Hobbs, Ben Cant, A. K. Williams and Ulrich Brunner. A good second was found in Mr. C. C. Eversfield, Denne Park, Horsham, a beautiful example of Maman Cochet being noteworthy. Third prize was secured by Mr. H. R. Darlington, Park House, Potter's Bar, Herts, with several excellent blooms, notably George Dickson, Bessie Brown and Ards Rambler.

Four exhibits in the class for twelve blooms of any Rose except Tea or Noisette were staged in friendly rivalry. Dean Hole securing leading honours for Mr. W. Times. Two or three of the blooms were very handsome; the others looked as if they had been kept for a time. Less interesting blooms secured second prize for Mrs. Bevil Portescue, Dropmore, Maidenhead, Berks; and with the same variety Mr. C. C. Eversfield gained third prize.

Open to Growers of Fewer than 2,000 Plants.

There were but two entries in the class for twenty-four blooms, distinct varieties, the first prize being awarded to Mr. F. A. Govett, Holiday House, Sunningdale, Ascot, for a good exhibit, considering the season, Mme. Jules Gravereaux, Lyon, Ulrich Brunner, Avoca, White Maman Cochet, Mrs. Howard Clark, John Cuff, Earl of Warwick and Maman Cochet being his best examples. Second prize was awarded to Mr. Gulliver Speight, Market Harborough, for rather small, though bright, flowers of pleasing form.

There were three exhibits in Class 44, for eighteen blooms, distinct. An excellent exhibit from Mr. R. de V. Pryor, Preston, Hitchin, well deserved the first prize it gained. Splendid blooms of Gloire de Chedane Guinoisseau, Mrs. Theodore Roosevelt, Mrs. J. H. Welch, Bessie Brown, A. K. Williams, Mrs. Foley Hobbs, Mamie, Mme. Jules Gravereaux, Mrs. J. Laing, Florence Pemberton, W. R. Smith, Mildred Grant and a glorious bloom of George Dickson were shown. Second honours were secured by Mr. J. Hart, Lochinver, Little Heath, Potter's Bar, with a neat and attractive exhibit. Gloire de Chedane Guinoisseau and Hugh Dickson were capital blooms. Mr. F. Slaughter, Steyning, was awarded third prize for a rather poor series.

Only three entries for nine blooms of any Rose except Tea or Noisette were forthcoming, a box of blooms of Frau Karl Druschki of even form winning first prize for Mr. J. Hart. Second prize was awarded to Mr. R. de V. Pryor for irregular blooms of Yvonne Vacherot; and with small blooms of Mildred Grant, Mr. Gulliver Speight was placed third.

In an extra class for Divisions E and F, for six distinct varieties, three blooms of each, there was only one exhibit. This came from Mr. J. Hart, and was awarded first prize. J. H. Welch, Florence Pemberton, Suzanne Marie Rodocanachi, Dr. O'Donel Browne, Frau Karl Druschki and Hugh Dickson were the varieties shown.

Open to Growers of Fewer than 1,000 Plants.

Six exhibits of twelve blooms, distinct, in the leading class of this division made quite a good show. Premier honours rested with Mr. Charles Lamplough, Kirkstall, Alverstone, who is always strong in this class. Superb examples of cultural skill were shown, and their names were Mrs. Foley Hobbs, Gloire de Chedane Guinoisseau, Frau Karl Druschki, Mrs. Welch, Avoca, Mme. Jules Gravereaux, J. B. Clark, Mildred Grant, William Shean, Bessie Brown, Lyon and A. K. Williams. Second prize was secured by Mrs. Henry Balfour, Langley Lodge, Headington, Oxford, with a very beautiful series, Florence Pemberton, Her Majesty, Charles Lefebvre and Rhea Reid being quite good. Third prize was won by Mr. Ernest G. Mocatta, Woburn Place, Addlestone, with a bright and attractive series of blooms of good form. This was a quite excellent stand.

Only one entry in Class 48 for nine blooms of any Rose except Tea or Noisette was forthcoming, Frau Karl Druschki, of medium size, winning first prize for Mr. Charles Lamplough.

Open to Growers of Fewer than 750 Plants.

The leading class for twelve blooms, distinct varieties, found no fewer than six competitors. Premier honours rested with Mr. F. H. Cook, Birch, Colchester, with a grand lot of blooms, not so well staged as usual. Notable examples were Mildred Grant, Frau Karl Druschki, Gloire de Chedane Guinoisseau, Juliet, Avoca, G. C. Waud, White Maman Cochet and Mrs. Coxhead. A capital box of blooms secured second prize for Mr. E. B. Lehmann, Ifield Lodge, Crawley, Sussex. Ulrich Brunner, Earl of Warwick, Bessie Brown and a superb example of Gloire de Chedane Guinoisseau were noteworthy. A dozen very neat and even, though rather small, blooms won third prize for Mr. Walter Stevens, Fair Oak, Radlett, Herts. The first prize in this class takes the Ben Cant Memorial Prize.

The seven entrants in the class for six blooms of any Rose except Tea or Noisette made a welcome show. First prize was awarded to fine examples of Dean Hole, which were shown by the Rev. F. R. Burnside, Great Stambury Rectory, Essex. Large, clean, chaste blooms of Frau Karl Druschki placed Mr. F. R. Biggleston, Jesmond, Puckle Lane, Canterbury, second; and with Mildred Grant, Mr. F. H. Cook was awarded third prize.

Extra Class for Divisions G and H.

The seven exhibits in this class made a very excellent display. Mr. Charles Lamplough was again to the fore, winning with good examples, the better blooms being Gloire de Chedane Guinoisseau, Mme. Jules Gravereaux and Mrs. Foley Hobbs. A good second was found in Mr. F. H. Cook, who had Mildred Grant in grand form. Third prize was secured by Mr. F. H. Fieldgate, The Cottage, Shrub End Road, Colchester, Avoca in his stand being very fine.

Open to Growers of Fewer than 500 Plants.

Only three entries in Class 52, for twelve blooms, distinct, were shown, Dr. W. P. Panckridge, Petersfield, Hants, being adjudged first with some really handsome blooms of high quality, Mrs. Theodore Roosevelt (superb), Mrs. Joseph Welch, Mrs. Stewart Clark, Mrs. A. E. Coxhead, Bessie Brown and Florence Pemberton all being noteworthy. Second prize was awarded to Mr. Stuart Hogg, Leaside, Hertingfordbury, with small, neat blooms; and third prize went to the Rev. F. G. A. Phillips, Taplow Rectory, Bucks, with a good series.

Class 53, for six blooms, distinct, was represented by seven entries. A grand lot of blooms won first prize for Mr. H. C. Baker, Bayfordbury, Hertford. Maman Cochet, White Maman Cochet, Dean Hole and G. C. Waud were grand. Mr. J. Smart, Sherwood, Stevenage, was a capital second, and the Rev. H. S. Arkwright, Breinton Vicarage, Hereford, was a pleasing third.

The class for six blooms of one variety had only three competitors. Dr. W. P. Panckridge was first with good examples of Dean Hole; Mrs. C. Giddins, Windmore Hall, South Mymms, Herts, was second with Mrs. Theodore Roosevelt, and with Avoca the Rev. F. G. A. Phillips was third.

Competition in the classes open to growers of fewer than 350 and 200 plants respectively was very keen, and the most praiseworthy interest was evinced in these classes by a very large number of visitors to the show. The flowers were good in most instances, reflecting great credit on the growers. Those who have never won a prize at an exhibition of the National Rose Society were also provided with classes, and these, as usual, were of considerable interest.

Metropolitan classes, too, for growers residing within eight miles of Charing Cross, brought out some very interesting competitions, showing how keen is the culture of Roses within the range of London smoke.

In Class 73, for six blooms of Lyon Rose and six blooms of Mme. Melanie Soupert, there was only one competitor, who had blooms of a somewhat mixed character. Mr. W. Boyes was awarded first prize, one good bloom of both varieties calling for notice.

Class 74, for the Hammond Prize for six blooms, new varieties, distinct, found five competitors. First prize was won by Mr. G. A. Hammond (the donor), Woodlands, Burgess Hill, Sussex, who showed six beautifully even examples of George Dickson, Mrs. Richard Draper, Mrs. Charles Hunter, Coronation, Frances C. Seton and St. Helena. Mrs. Bevil Fortescue was second, showing Mrs. Joseph Welch and Elizabeth in superb fashion. Third prize was awarded to Mr. H. L. Wettern, Waratah, Sanderstead, Croydon, George Dickson being his best bloom.

Exhibition Roses (Tea and Noisette).

For the Tea and Noisette Amateur Trophy, for eighteen blooms, distinct varieties, there were five entries, first prize being awarded to Mrs. Bevil Fortescue. The best blooms were White Maman Cochet, Mrs. Foley Hobbs, Mme. Constant Soupert, Medea, Mrs. Myles Kennedy, Maman Cochet, Nita Weldon, Molly Sharman Crawford, W. R. Smith, Auguste Comte, La Boule d'Or, Mme. Henri Berger, Mrs. Herbert Stevens, Comtesse de Nadaillac and Miss Alice de Rothschild. A good second was found in Mr. F. Slaughter, who had some noteworthy Roses in his stand—Maman Cochet, White Maman Cochet, W. R. Smith, Maréchal Niel, The Bride and Mrs. Myles Kennedy. Mr. C. C. Eversfield was placed third, and on his stand there were a few blooms of exceptional merit.

There was but one stand of blooms for Mrs. Alfred Tate's prize of a piece of plate, and this was somewhat poor. First prize was awarded, nevertheless.

Only one competitor again was found in the class for eight distinct varieties, three blooms of each. Mrs. Bevil Fortescue was again to the fore, winning first prize with a charming series. The better varieties were Maman Cochet, Mrs. Foley Hobbs, White Maman Cochet, Mrs. Hubert Taylor and Auguste Comte.

The two boxes of six blooms of one variety were very beautiful, and the blooms of White Maman Cochet which secured first prize for Mr. T. E. Pallett were a very beautiful lot indeed. They were even and of charming form. Mr. C. C. Eversfield was second with the same variety as the first prize winner, though less meritorious.

Open to Growers of Fewer than 500 Plants.

The class for twelve blooms, distinct, is always very interesting, the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, leading the four competitors with a lovely series of blooms. The better varieties were Maman Cochet, Mrs. E. Mawley, White Maman Cochet, Mme. Jules Gravereaux and Mrs. Foley Hobbs. Mr. F. H. Cook was awarded second prize with an even series, in beautiful condition; third, Mrs. Henry Balfour with a pleasing exhibit.

Six exhibits in the class for six blooms of one variety were charmingly displayed. Leading honours fell to the Rev. F. R. Burnside with remarkably good blooms of White Maman Cochet. Second went to the Rev. J. B. Shackle for lovely blooms of Maman Cochet, and the third prize was awarded to Mr. F. H. Cook for grand examples of Auguste Comte.

Open to Growers of Fewer than 200 Plants.

The Prince Memorial Prize, for nine blooms, distinct varieties, found only one competitor in Mr. H. L. Wettern, who won the first prize with a beautiful series of well-grown blooms, White Maman Cochet, Mrs. Myles Kennedy, Mrs. H. Taylor and Mrs. Foley Hobbs being noteworthy.

Class 83, for six blooms, distinct, was represented by two entries only. Mr. R. de V. Pryor was awarded first prize with a well-finished lot of blooms, Mrs. Foley Hobbs, Mrs. Edward Mawley, Mme. Jules Gravereaux, Maman Cochet and White Maman Cochet being all that one could desire. A good second was found in Mr. Charles Lamplough, Mrs. Foley Hobbs, Mrs. Myles Kennedy and Mme. Jules Gravereaux being his best blooms.

Class 84, for six blooms of one variety only, was represented by six exhibits, a grand set of blooms of Mrs. Foley Hobbs gaining first prize for Mr. Charles Lamplough. Second prize was won by Mr. H. L. Wettern with Mme. Jules Gravereaux, and with six lovely White Maman Cohets Mr. H. C. Baker was placed third.

Open to Growers of Fewer than 100 Plants.

In Class 86, for six blooms in not fewer than four varieties, there were ten exhibitors. First prize was won by Mr. C. A. L. Brown, Hatfield Peveril, Essex, with six really capital blooms. Mr. J. Smart, jun., Sherwood, Stevenage, was second, and third prize was awarded to Mr. Arthur Merehouse, St George's Hill, Horley, Surrey.

The class for six blooms, distinct, found Mrs. Denman Murray, Horsenden, Ryde, Isle of Wight, leading the five competitors with quite good blooms. Mrs. F. Peters Wood, Broom Lodge, Weybridge, was second, and the Rev. F. G. A. Phillips was placed third.

Class 87, for four trebles, was an extra class for amateurs in Divisions III, IV, and V. A capital lot of blooms won first prize for Mr. F. H. Cook, who had Maman Cochet and White Maman Cochet in beautiful condition. The Rev. F. R. Burnside was placed second, showing superb blooms of the two varieties mentioned in the first prize series. A beautiful lot won third prize for Mr. F. Slaughter.

In Class 89, for a round basket of Tea or Noisette Roses, the first prize exhibit was very beautiful. Maman Cochet was splendidly represented in the first prize exhibit of Mr. F. H. Cook. A good second was seen in the blooms from Mrs. E. M. Wightman, Bengoe, Herts, who showed Maman Cochet.

Perpetual-flowering Decorative Roses.

Class 90, for three baskets of cut Roses, three distinct varieties, each variety in a separate basket, was represented by one exhibit only, Mrs. E. Wightman winning first prize with a charming trio. Ethel, Daphne and Mrs. W. Cutbush were the varieties shown.

There were five entries in the class for five stems each of five varieties. A beautiful set won first prize for the Rev. J. B. Shackle. Irish Elegance was well shown. These varieties, we were sorry to see, were not named. Second prize was won by Mr. J. Hart, who had Lady Ash-town, Pharisæer, Mrs. A. Tate, Mme. L. Pain and another. Third prize was secured by Mr. J. Walter Smith, Sparrows Herne Hill, Bushey Heath, Herts, for a really handsome series of blooms. Dorothy Page-Roberts, Lady Ashtown and Mme. Melanie Soupert were very fine.

Decorative Roses.

There were no competitors in the class for eighteen distinct varieties, not fewer than three nor more than twelve stems of each variety.

In the class for twelve bunches, however, the five exhibits made a grand display. Mr. H. L. Wettern well won the first prize with a grand lot of bunches, showing, among others, American Pillar, Crimson Rambler, Dorothy Perkins, Blush Rambler, Hiawatha, Dawn, Ethel, Auguste Comte, Mme. Abel Chatenay and General Macarthur. Second prize was won by Mr. Ernest G. Mocatta, who had grand bunches of Orleans Rose, Crimson Rambler, Dorothy Perkins, Blush Rambler and Irish Elegance. A charming series won third prize for Viscountess Enfield, Dancers' Hill, Barnet.

The eight entries in the class for six bunches, distinct, made a most glorious piece of colour. The winning series were those shown by the Rev. J. B. Shackle, and these, again, were unnamed, which is a distinctly unfortunate mistake. Mr. J. Walter Smith was placed second with a charming lot, Irish Glory being conspicuous. Lovely bunches won third prize for Mr. F. A. George, Red Hill, Worcester, who had Grüss an Teplitz and Mme. Alfred Carrière in good form.

Seven entries in Class 97, for six vases of wichuraiana Roses, were beautiful. Mr. H. L. Wettern again secured leading honours with popular varieties. Miss Beatrice H. Langton, Raymead, Hendon, N.W., was second with a freely flowered set, François Juranville being noteworthy. Third prize was awarded to Mrs. E. Wightman, who had Dorothy Perkins in beautiful form and colour.

Ladies' Artistic Classes.

For a basket of cut Roses, lightly arranged with any Rose foliage, there were seven competitors, first prize being awarded to Mrs. Colston Hales, Virginia Lodge, Warminster, for a distinctly artistic creation. A pink colour scheme won second prize for Mrs. A. E. Brown, Brookes Lodge, Reigate, and third prize went to Mrs. A. E. Clarke, The Hurst, Mottingham, Kent, for American Pillar, in glorious form and colour.

There were eight showing in the class for a vase of cut Roses, lightly arranged with any Rose foliage. First prize went deservedly to Mrs. Charles Williamson, Wilstead, Canterbury, for a wonderful vase of Gloire de Chedane Guinoisseau, in the pink of condition. Second prize was won by Mrs. J. Walter Smith with Irish Elegance, in lovely form, and third prize went to a warm colour scheme set up by Miss Jessie B. Langton, Raymead, Hendon, N.W. Dorothy Page-Roberts and Minnehaha were the varieties used.

There were seven bowls of Roses in Class 104. Gustave Regis, as shown by Miss Jessie B. Langton, and which won first prize, was lovely. A rather formal creation, using Irish Elegance and kindred coloured Roses, won second prize for Mrs. Colston Hales, and third prize was secured by Mrs. J. Walter Smith for a lovely bowl of Irish Elegance.

In other decorative classes for bowls, vases, baskets, button-holes, &c., the competition was very good, and some beautiful artistic creations were exhibited. The competition was very keen, and proves most conclusively how great a hold this aspect of the society's work has upon the ladies. Table decorations were numerous and very daintily arranged.

Class 101, for a table decoration of single Roses, was very popular, and found numerous entrants. Premier honours rested with Mrs. J. Walter Smith for a beautiful table of Rose Irish Elegance, in which lovely sprays of highly coloured blossoms were finely represented. Second prize was won by Mrs. Walter Morrison, who also used Irish Elegance, displayed in silver vases. In the third prize, won by Countess Olga Pontiatine, Glebovo, Egerton Road, Weybridge, Irish Elegance was again supreme, being lightly and deftly disposed.

THE GARDEN.

No. 2227.—VOL. LXXVIII.

JULY 25, 1914.

NOTES OF THE WEEK.

An Easily Grown Water Lily.—One of the most beautiful and, incidentally, one of the most easily grown of all Water Lilies is *Nymphæa Marliacea albida*. It will make luxuriant leaves and produce a succession of blooms if given about three feet of water. It is one of the freest to bloom, and may be safely recommended for the small garden if given all the sun possible and a pool of still water. It is well known that all Water Lilies prefer still water to a running stream. The flowers are very large, pure white, with light yellow stamens, and are fragrant.

Summer Treatment of Violets.—Plants which are intended to produce flowers throughout the winter should receive special attention for the remainder of the summer. Stop side shoots as they appear, in order to direct the energies of the plants to the formation of strong crowns, without which the results will not be satisfactory. Red spider, which is the most troublesome enemy to contend with, may be kept in check by frequent syringing and light dustings of soot; but no great quantity of soot should be applied at one time, or the tender foliage may suffer in consequence. Keep the soil stirred with a Dutch hoe, and if dry weather sets in, a good watering of clear soft water should be given.

The Nankeen Lily.—This beautiful Lily, *L. testaceum*, is totally distinct in colour, as the clear nankeen tint is not seen in any other. It is said to be of hybrid origin, and certainly in many points it resembles the supposed parents, the scarlet Turk's-cap Lily, *Lilium chalcedonicum*, and the Madonna Lily, *L. candidum*. In growth and size of flower it resembles the latter, while the flowers are prettily reflexed as in the former. Established plants under favourable conditions grow from 6 feet to 7 feet high, with horizontally poised heads of drooping flowers, which have bright red anthers. It is a plant that will grow in light, sandy loam better than many other Lilies, and, like the Madonna Lily, it should only be disturbed when absolutely necessary.

Interesting British Plants.—Among the more interesting British plants that have been sent to the Cambridge Botanic Garden in the past year are: *Gladiolus illyricus*, found in the New Forest and the Isle of Wight; *Lathyrus maritimus*,

the Sea Pea, a local species growing on pebbly seashores; *Erica Mackaii*, found in Galway and in Spain; *Nepeta Glechoma f. hirsuta*, a pallid micranthous form, found on the downs above Merrow in Surrey; *Viola riviniana f. luxurians*, Mr. Bickham's White Violet; *Salix Grahamii*, supposed to have been brought from Frouvyn in Sutherland by Professor Graham; *Saxifraga umbrosa*, from South Kerry; a Wallflower from Colchester and Guildford Castles (from these

18 inches to 2 feet high. The flowers vary from deep rich brown to bright yellow, many being beautifully spotted, and are borne in great profusion.

Rose Lady Alice Stanley.—This splendid Rose has done wonderfully well with us again this year, and we regard it as one of the best rose pink varieties for garden decoration. The blooms are fragrant, large, and held erect on stout stems, and the large, leathery leaves are seldom affected with mildew. This Rose ought to be in every garden.

The Mount Etna Broom (*Genista ætnensis*).—This is a most effective Broom during July and August, a season when flowering shrubs are not plentiful. Its graceful cord-like, arching, pendulous branches are almost hidden by the myriads of golden flowers. In common with the majority of the family, this Broom is happy upon rough, dry banks or in warm, light soils, which satisfy few things. As its name indicates, it comes from Mount Etna in Sicily, and appears to be perfectly hardy. It is readily raised from seeds, which are freely produced. This is the best means of increasing it, and as it is a fast grower, a good plant is soon obtained. It usually grows about ten feet high, but a fine specimen we saw the other day was almost twice that height and equally as far through, making a conspicuous feature against a background of large conifers.

Sweet Pea Week in London.—Sweet Pea enthusiasts had quite a busy time in London last week. The National Sweet Pea Society held its fourteenth annual show on Thursday, and followed it by a reception and dinner at the Hotel Windsor in the evening, when the innovation of a musical programme, generously provided by Messrs. James Carter and Co., was thoroughly enjoyed by a large gathering of members and friends. On Friday a number of members visited



A BEAUTIFUL WHITE WATER LILY: *NYMPHÆA MARLIACEA ALBIDA*.

and other castles always apparently the same form); *Verbascum* species, a critical form found in the grounds of Emmanuel College; and *Ulmus minor* (Miller), an interesting Elm recently found wild near Chatteris.

A Beautiful Strain of Hybrid Calceolarias.—One of the principal features in the conservatory at the Cambridge Botanic Garden is a display of hybrid Calceolarias, the result of crossing *C. The Bronze Age* with *C. Clibranii*. The plants are of a graceful branching habit, from

the society's trials at the Burbage Experimental Station, Burbage, Leicestershire, where Major Hurst very kindly met the visitors and later in the day explained some of the very interesting experiments that he is conducting on Mendelian lines with animals and plants. It is satisfactory to note that no fewer than 145 new members have joined the National Sweet Pea Society this year, and that twenty-two additional societies have become affiliated. A report of the London show will be found on another page.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Ostrowskia magnifica in Berkshire.—I enclose a photograph of a plant of *Ostrowskia magnifica* growing in the gardens here. As will be seen, the plant is growing at the foot of a wall which faces east, and the position appears to suit it well, the growth this year having reached the height of 6 feet. Last week, when at its best, it had fifteen fully expanded flowers open at one time, the largest being nearly eight inches in diameter.—E. W. DIE, *The Gardens, Bowden Green, Pangbourne, Berks.*

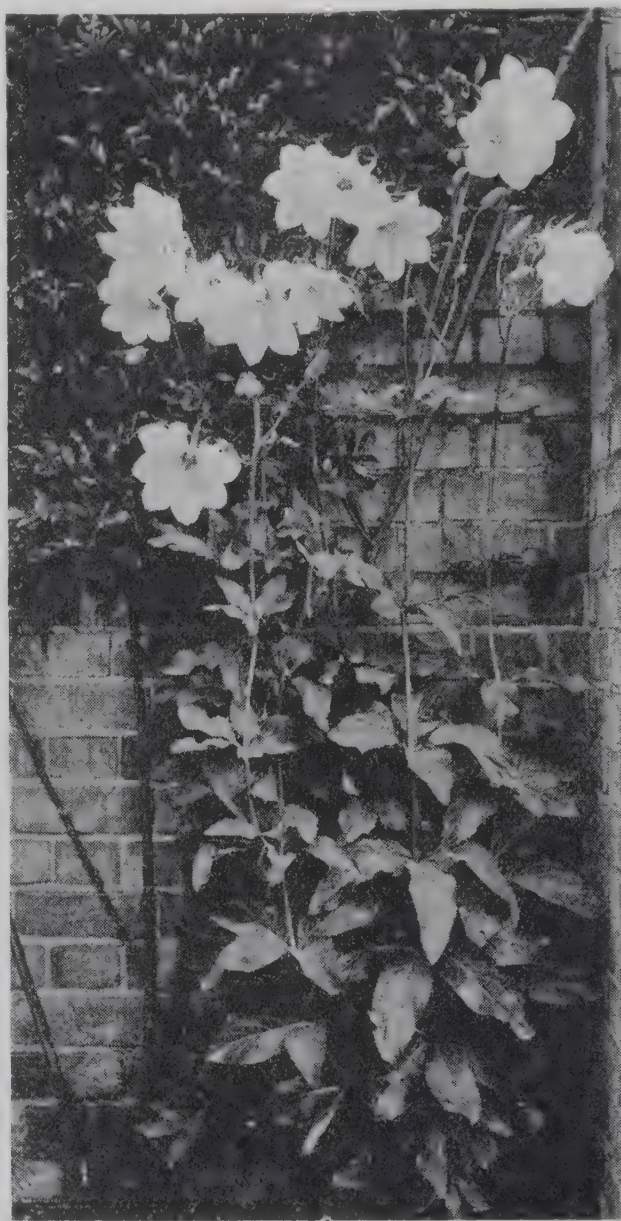
Cyclamen neapolitanum and its Seeds.—Surely there are few plants so tardy in maturing and ripening their seeds as is the above. Flowering as it does in August and September, it is usually the following June before we gather ripe pods from it, and there are many now (July 13) which have still to be gathered. When ripe, the seeds are at once sown in shallow boxes in a compost consisting largely of decayed leaf-mould and Cocoanut fibre, with an admixture and surfacing of fine loam. It is usually three years before the seedlings commence to flower.—F. HERBERT CHAPMAN.

Lilium giganteum in Scotland.—When visiting the gardens of Mr. T. Bennet Clark at Newmills, Balerno, Midlothian, on July 10, I noted, among a host of good things, two fine specimens of the above Lily in full flower. Both had flower-stems about six and a-half feet high; one bore eight flowers and the other eleven. Mr. Bennet Clark tells me that he frequently has this *Lilium* in flower. He raises his own stock from offsets, this being a saving of time as compared with seedlings (which some prefer), as they take about ten years to flower from the date of sowing.—CHARLES COMFORT.

New Rambling Roses.—In reply to your correspondent "E. M." on page 350, issue July 11, I must say I have not grown *Neige d'Avril*, but *Fräulein O. Hesse* I have had for some time, and consider it a lovely Rose, but not white. I do not call *Kaiserin Augusta Victoria* white. Since penning my first notes I have flowered *Sanders' White*, *Snowdrift* and *Mrs. M. H. Walsh*, all really grand whites. The first named is the snowiest white; but *Snowdrift* appeals to me more for its effectiveness. *Pemberton's White Rambler* will be valuable among the multiflora section, and a splendid companion to the old *Crimson Rambler*.—DANECROFT.

The Naming of Plants.—I undertook recently to name the flowers in a large garden in the North, but found that there were over twenty perennials I could not identify. Naturally, I hied to the nearest authorities, and, in order to ensure correctness, sent away duplicate sets of plants, one to the Botanic Gardens in the city close to us, and one to a large seed firm who had men specially "well up" in herbaceous plants. Now the results were astounding; in some five cases the actual genera were not the same, while over fifty per cent. of the others varied in the species. Without disparaging the excellent assistance given me in both cases, let me ask who is the authority? The garden in question is a very old one. On consulting my "Nicholson" I find room for doubt in the case of some names given, and even in that large work only a small number of species are noted. Again, suppose I have an unknown flower, how can I get it identified? Does the science of classification

remain in the hands of a few experts at Kew, and what authority is their knowledge based on? (The "Kew Index" probably, but how few libraries have it.) Wanting to get at the root of the matter, I have already made those enquiries, and have been answered; the gist of the answer being that I ought to study the "Floras" of various countries if I want to identify flowers myself! Here, again, are difficulties; must I keep all the "Floras" (our largest library in Scotland does not have them), and must I hunt through them all till I get my flower identified? Take the case of an ordinary gardener with an "unknown"; he has "Nicholson," which is worse than useless in this case; he studies catalogues of flowers and looks at pictures—also



A WELL-GROWN PLANT OF OSTROWSKIA
MAGNIFICA.

bad; he has not a classification table extensive enough to include all genera, even if he could work it; finally, he goes to "someone else" who knows better. Then we arrive at the original question—who is the authority, and does a full knowledge of classification rest in the hands of a chosen few? The question is opportune and interesting; but if the answer is as I suspect, surely we have need for some remedy!—H. H. A.

Bishop's Weed, Cow Parsley and the Roman Nettle.—Mr. Brotherston's humour seems to be of a very virulent kind. It is pleasing to know that the poor, neglected, ill-treated Bishop's Weed has at least one champion, and one who knows its virtues, though only supposed. But why resurrect King James? Certainly it is difficult to see the

point concerning Cow Parsley and its need for cultivation, unless it be to make botanising easier, though really much less interesting. One plant more should interest Mr. Brotherston; it is the Giant Roman Nettle (*Urtica pilulifera*). The writer remembers a fine patch of this plant growing in a garden in Kent. Every plant grew about six feet high, stout and strong in proportion, and truly a fitting monument to the ancient warriors who spread themselves over that fair county hundreds of years ago.—H. R., *Holland.*

Notes on Last Week's "Correspondence" Columns.—In your "Correspondence" columns last week I noted several most interesting topics on which I should like to comment, if you will allow me. The first concerned "The Most Fragrant Rose" (with a witty allusion to the Apostle and Prophet). I rejoice greatly to see the question of fragrance to the fore. It has been too long neglected. The next paragraph dealt with the appropriate naming of new plants, from "A. E. G.," a New Zealand writer, with whose opinions on the subject I strongly agree. I think especially the selection of personal names is objectionable, and oftentimes absurd. A friend recently desired to name a new Dahlia after me, an honour I hastened to decline; for, being no longer young or slim, I thought how terrible it would be to read remarks like the following in THE GARDEN: "Anne Amateur is of an old-fashioned type, now rarely seen, and, though of a fresh rosy tint, successfully enduring exposure to the strongest sunshine, and hardily resisting both storm and frost, is lacking in lightness and grace, and utterly superseded by more modern and attractive specimens." Then followed a most interesting note on "Lightness in Table Decorations," from H. A. Elliott. On this I venture these observations. To me Sweet Peas and Gypsophila long ago became wearisome. Though a good combination, it was a case of *toujours perdrix*, and made me feel like the London apprentices who in bygone days stipulated that they should not have salmon for dinner too often! For my part I think table decoration should vary in accord with the style of the dinner. With roast beef and plum pudding as principal items, bowls of Roses would go very well; while the flowers for a meal consisting chiefly of what our forefathers termed "kick-shaws" should be dainty in tint and light and airy in arrangement. I sometimes devise schemes for, and send flowers from my country garden to, a friend who (luckless woman!) has to give dinners in London in the season. One which met with great approval, on a broiling June evening, was as follows: In a large cut-glass centre bowl floated a few Water-Lily-like, small white single Pæonies, on leaves of the Winter Coltsfoot (*Tussilago fragrans*), real Water Lilies and leaves being then unobtainable. Some *Limnanthes* Douglasi counterfeited Water Crow's-foot. Round this little cool-looking Lily pond rose, in slender clear cut-glass vases, yellow Spanish Iris, with old-fashioned striped green and white Ribbon Grass and some wild Grasses. These stood on small glass plateaux placed on moss green plush. The guests voted the whole a great success. In conclusion, at the end of the "Correspondence" columns I came with surprise on my own name and an allusion to my village friend's recipe for White Rose ointment, with a request for a picture of the old ointment pipkin, which I will endeavour to send shortly. (Photographers are rather rare in the remote regions where I write.)—ANNE AMATEUR.

Rose Mme. Edouard Herriot.—I wonder how many amateurs have grown this Rose since it was sold by the nurserymen last autumn. No wonder such a great deal was written about it in the papers after it had received the Gold Cup. I have had four or five blooms off my plant. They are indeed a wonderful colour, and quite unique for a Rose. I can best describe the tints by likening them to that of the Sweet Peas Helen Lewis and Sterling Stent, which have been out at the same time as the Rose, and, putting them side by side, they have absolutely agreed with the Rose in colour. This is undoubtedly a great acquisition in the Rose world, and if lovers of Roses have not been fortunate enough to secure a plant this summer, they should lose no opportunity of securing one next November. I am so delighted with mine that I cannot help singing its praises for the benefit of others.—HONOR T. PITTS, *The Rectory, Loughborough.*

Rose American Pillar.—I can fully corroborate the remarks of your correspondent "H. G. B." on page 350, issue July 11, as to the merits of this beautiful climbing Rose. Like him, I purchased a plant from Messrs. Cannell and Sons when it was first introduced a few years ago, and since then it has been greatly admired by all. My only surprise is that even now so few are conscious of its merits. My own opinion is that in a few years' time, when more generally known, it will take premier position among rambling Roses. Many may be interested to know that it does equally well from cuttings planted in September in the open ground. In spite of the great merits of Blush Rambler and Dorothy Perkins, to my mind American Pillar surpasses them all. Good plants can be purchased at very moderate prices now, so there is no excuse for not possessing this charming Rose. While on the topic of Roses, I should be glad for information respecting another favourite of mine, Zephyrine Drouhin.—W. B. C., *Maidstone.* [Our correspondent does not indicate what sort of information he desires about Rose Zephyrine Drouhin. It is a great favourite with us on account of its wonderful fragrance, dainty carmine pink colour, and freedom of flowering. It is a Hybrid Bourbon, and does best grown as a large bush or pillar. Its stems are thornless.—ED.]

The Most Fragrant Rose.—It is to be hoped the judges for the Clay Challenge Cup will keep in mind beauty of form as well as fragrance when making their awards in the future. There was much diversity of opinion expressed at the Holland House Show regarding the decision of the judges, and many thought Mrs. George Norwood should have received the award. This Rose has a most perfect form and charming colour, and for fragrance is quite equal to the Rose that received the award, which from the illustration you gave on page 352 has no beauty of form to recommend it. The National Rose Society have very wisely recognised fragrance in their new rules for judging Roses for their gold medal, and no doubt raisers will give this matter due consideration; but I feel sure I shall have the majority of Rose-lovers with me when I claim for form that recognition it undoubtedly deserves. I was glad to find that the most beautifully formed novelty exhibited at the recent "National" Rose Show, namely, Mrs. Bertram Walker, possessed a delicious fragrance, and the judges were unanimous in awarding it a gold medal. I may say I do not like the term "scent" as applied to Roses and other flowers. The Crown Imperial has a scent

most obnoxious to one's sense of smell, and Mr. Sawyer in his excellent work, "Rhodologia," speaks of *Rosa platyacantha*, *R. Capucine* and *R. beggeriana* even developing an odour of bugs and coriander. He also asserts that cut Roses placed in a vase diffuse their fragrance more powerfully than when growing on the plant, so that, even for this, should not the award be withheld until the varieties are compared growing upon the plants?—DANECROFT.

The Horseshoe Fern.—I have seen the note by Mr. L. Stowe on this subject in the issue of April 11, and was surprised at his claim that the Fern is very rare and only known to grow in the vicinity of Mount Egmont. I quote from "Ferns of New Zealand," by H. C. Field, C.E., Member of the New Zealand Institute: "*Marattia fraxinea*. Para, Para Reka, or Para Tawhiti of the Maoris. Horseshoe Fern of the Europeans. This Fern is found in Guinea, Angola, Zambesi-land, Mascaren Islands, Natal, Cape Colony, the Neilgherries, Ceylon, Philippines, Malacca, Polynesia, Queensland, and Norfolk Island, besides New Zealand. It was formerly plentiful in the North Island (N.Z.), where its tuberous roots formed an important article of food, and caused the Maoris to assert they had a Potato before Cook visited the Colony. The wild pigs, however, have nearly exterminated it, so that it is only now found in a few localities, extending from the North Cape to a little south of Mount Egmont." Mr. Field also states it is the only plant of the genus *Marattia* in New Zealand, that it is only found in very wet, almost boggy, ground, and is easily cultivated in rich soil, kept well saturated with water, that cattle and horses both eat greedily of the fronds, which are said to grow as much as 14 feet high. I have specimens about five feet high which came from Waiuku, Buckland and Paparimu, bush districts all within forty-five miles of Auckland. I am told they are fairly plentiful on the Coromandel peninsula; and the district of Kaipara takes its name (Kai=food, and para=the edible Fern) from the prevalence of this plant in old times. A few years back I visited a fine group of Horseshoe Ferns (known here also as the King Fern) at Buckland, thirty-three miles south of Auckland, where the owner had reserved a clump of bush and fenced it to protect the Ferns from pigs and cattle, and I then saw specimens with fronds I could walk under. However, as Mr. Field says, they are fast disappearing wherever pigs and cattle range the bush, and it is only a matter of time when they will be very difficult to find growing in a state of Nature in New Zealand.—A. E. GRINDROD, *Woodside Road, Auckland, New Zealand.*

FORTHCOMING EVENTS.

July 28.—Royal Horticultural Society's Meeting and National Gladiolus Society's Combined Show at Vincent Square, Westminster.

July 29.—Flower Shows at Bishop's Stortford and Castleton.

July 30.—Midland Carnation Show at Edgbaston Botanic Gardens (two days). Royal Lancashire Agricultural Show at Liverpool (four days). Killarney Summer Show.

August 1.—Société Française de Horticulture de Londres Meeting. Dumbarton Sweet Pea Show.

August 3.—Flower Show at Carshalton.

August 4.—Flower Show at Abbey Park, Leicester (two days). Scottish Horticultural Association's Meeting.

THE SUMMER TREATMENT OF LAWNS.

I HAVE read with great interest your editorial note on mowing lawns without a grass-box, page 349, issue July 11. You draw attention to the great benefit derived by the lawn from the cut grass being left to decay, but you state as a drawback that the clippings would interfere with play if the lawn were used for tennis or croquet. It may therefore interest my fellow-readers of THE GARDEN if I describe a device by which it is possible to leave the clippings even on a putting green. While staying at North Berwick last month I walked over the links early one morning before breakfast. The men were working on the greens, and were carrying out an operation which from a distance greatly puzzled me. I walked up to them and found that they were sweeping the greens with long Bamboo poles. It appeared that the mowing had just been completed, and that the sweeping had the effect not only of spreading the clippings, but of rubbing them in and causing them to disappear. The Bamboos were about fifteen feet long. The butt was thick enough to be stiff for nearly eight feet, and this enabled the "waggly" end to be kept low and flat. Sweeping was done from side to side, and caused no fatigue. Playing over the greens later in the day, no one would have known but what every stray blade of grass had been studiously removed. The greens were as true as billiard tables.

If this is possible on a putting green, on which one plays with a light and easily deflected ball, no difficulty ought to occur in the case of games such as tennis, croquet or bowls. Moreover, the greater length to which grass is allowed to grow on tennis and croquet "greens" would make it all the easier to "rub in" the clippings. The whole secret lies in frequent mowing, so that the clippings are never long. Grass sufficient to form a crop of hay could obviously not be disposed of. But then mowing without a grass-box is so very much less laborious that frequent mowing may result in a saving of time and effort.

If you can spare the space, I should like to have an opportunity of stating my firm conviction that to leave on cut grass is the best of all possible means of manuring a lawn. All of us who are interested in farming know that land under grass slowly accumulates fertility. But if the land is heavily cropped, as happens to a lawn which is regularly mown with a grass-box from March to October, the exhausting process is more rapid than the accumulation of fertility. The finer grasses starve to death, and there remain only weeds, which can find a living practically anywhere. If, however, the grass is left on, nothing is taken out of the land, and it becomes richer and richer every year. This slow process of enrichment produces a totally different effect from the sudden application of powerful manure. I have applied the latter myself to lawns, and I have also watched the results in the gardens of friends. In every case the result has been eventual ruin. The explanation seems to be this: In a starved lawn the only vigorous subjects of the grass tribe are coarse things, such as the Poas and Yorkshire Fog. These alone are in sufficient health to benefit from stimulating food. (Do we not know Miss Jekyll's saying that to give manure to a sickly plant is like feeding a delicate child on beef steak and brandy?)

LANDOWNER

THE MORE DIFFICULT DIANTHUSES.

(Continued from page 366.)

ALTHOUGH a number of people have no difficulty with some of the Dianthus now mentioned, many cultivators find them more troublesome than the others, and I have, therefore, thought it desirable to write of them separately. They will generally thrive in a moraine, and can also be successfully treated in well-drained parts of the rock garden if surfaced

cause. *D. callizonus* is exquisite with its 2-inch or 3-inch stems bearing large flowers of brilliant pink, charmingly zoned and spotted at the base with a deeper hue. The bluish foliage sets off the beauty of the blooms. A few young plants, raised from cuttings or division, should always be kept. A cool, stony, peaty soil should be tried. It is a lime-hater. May and June.

D. Freynii.—There is a good deal of confusion existing respecting *D. Freynii*, *D. Lereschii* and *D. microlepis*. *D. Freynii*, however, is a most exquisite little plant, forming tufts of small green leaves rising but little above the soil. Above these are borne tiny flowers of rose or rose purple

D. neglectus.—I may be called in question for including this among the more difficult subjects. The true form has grassy leaves and, on short stems not more than 4 inches or 6 inches high, lovely flowers of bright carmine with the backs of a kind of nankeen colour. It is said to be unsuitable for the moraine, but this is not the case everywhere. I have grown it well on a flat part of the rockery, surfaced with fine gravel and grit, in peaty soil, and treated to good soakings of water in the summer months. Cuttings for the best forms, and seeds. May and June.

D. nitidus.—A dainty little plant, apparently a miniature form of *D. alpinus*, and calling for the same treatment. It therefore requires no further mention.

D. sylvestris.—Reputedly difficult, this Pink is not really so, but it may die off suddenly without any apparent reason. Belying its name of *sylvestris*, it is a lover of dry, open, stony places, and should be grown in the moraine or in dry soil with plenty of grit and surfaced with gravel or chips. It has small grassy leaves and red flowers on stems 9 inches high. May to July.

Dumfries.

S. ARNOTT.



DIANTHUS CALLIZONUS, A BEAUTIFUL DWARF PINK FOR THE ROCK GARDEN.

with an inch or 2 inches of large grit or small gravel or chips.

Dianthus alpinus.—This lovely species is quite easy with many growers, but others, through some obscure cause, find it difficult to cultivate. It has a preference for partial shade when on the rockery, but does not appear to be so particular on the moraine, in which it apparently delights. *D. alpinus* has large flowers of rose or pink, charmingly spotted with deeper colour at the base, and raised on stems 3 inches or 4 inches in length. The white variety, though pretty, is not so charming as the type. Under the name of *superbus* there is a large bright variety offered, as well as some so-called hybrids, which do not appear to be any improvement upon the lovely *D. alpinus*. It is easily raised from seeds or increased by division. May to July.

D. cal-alpinus.—Those who despair of cultivating *D. callizonus* may well attempt the exquisite *D. cal-alpinus*, the offspring of the marriage of *D. callizonus* and *D. alpinus*. It is a handsome plant with good rose flowers, effectively zoned with crimson. It does well on a sunny rockery or the moraine. It is raised from cuttings, and flowers in May and June.

D. callizonus.—Mr. Irving and the staff of Kew are to be envied the success with which they cultivate this lovely Dianthus there. It has a baffling habit of dying off without apparent

on short stems, the whole completing a picture which appeals to the alpinist. I have found that this will thrive on a level spot on the rockery if mulched with grit or fine gravel, and in a well-drained place, but watered during dry weather in late spring and summer. The moraine is the ideal place for it. It does not object to lime, but has no preference for it. June to August. *D. Lereschii* should have rose flowers, those of *D. microlepis* being white with lilac spots at the base.

D. glacialis.—The despair of many, the Glacier Pink is yet one of the flowers which are so exquisite that it well repays almost any amount of care. It is not, however, so very difficult in the ordinary sense of the term, except that it may die off even after we have indulged it by giving the prescribed treatment which has proved the best. This is a cool place, well drained but not too dry, but in a peaty soil, or one composed of loam, leaf-mould and sand with some grit in it. No lime should be given. It also requires plenty of water while growing. It has narrow leaves in tufts, and handsome pink flowers, rather smaller than those of *D. alpinus*. It is, in fact, not so desirable as the Alpine Pink. *D. gelidus* is generally considered a form of the Glacier Pink. It is smaller, and has pink flowers spotted with white at the throat. The same treatment suits it. April and May

THE FUTURE OF THE ANTIRRHINUM.

THAT the Antirrhinum is rapidly rising in popularity is now so apparent that it is unnecessary to labour the point; but one may feel sure of one's ground in asserting that very soon it will be the leading favourite with those who want a subject for either small beds or broad masses where a prolonged display of bright colours is desired.

Nurserymen and seedsmen have awakened to the possibilities of Antirrhinums, and a good many firms are devoting considerable attention to building up strains and sets of really good varieties. Before long, doubtless, growers will set themselves to the task of bringing out the best that is in the Antirrhinum by growing on single stems, pinching out all lateral growths—[We hope not,—ED.]—and by systematic feeding.

It is well that some thought shall at this stage be given to the future of the plant, for while it is in every way desirable that the work of selection and improvement shall be diligently pursued, it is devoutly to be hoped that no craving for sensationalism shall take hold of admirers of Antirrhinums, which would sooner or later prove baneful rather than beneficial. First, there is the possibility of the introduction of a host of named varieties. It seems to me it will be positively dangerous to the well-being of the Antirrhinum to tolerate the thrusting upon the market of a great many varieties under meaningless and useless names, simply because they are slightly different in colour from others. Antirrhinums may, of course, be propagated from cuttings with the greatest of ease; but if, in order to meet a short-lived demand for a novelty, resort is had to rapid multiplication by propagating under glass, it will not be long before the sturdy vigour and immunity from pests and diseases is destroyed. Let good strains suffice, and let us adhere as closely as possible to the rational method of raising from seed.

It may be all very well to grow a small number of plants on the single stem principle, to disbud,

and to feed judiciously in order to produce a few extra good spikes of flower; but do not let this fancy become a mania. Do not start an Antirrhinum society and offer challenge cups for spikes valued by the yard; but let the natural and beautiful bush-like habit, the free and continuous blooming propensities, and the sturdy constitution of the plant be jealously guarded and carefully preserved, and we shall be long able to enjoy one of the most serviceable and beautiful of plants, which, while worthy of gracing the most favoured of gardens, is accommodating enough to adorn the humblest and most unpretentious garden of the handicapped suburban amateur.

HEATHER BELL.

DISEASES OF THE TOMATO.

THE Tomato is a plant which has become popular only within the last few years, yet in a short space of time it has proved most susceptible to attacks of various fungi which are of the greatest virulence and

spread with astounding rapidity. Even more curious still, and unfortunate, too, is the fact that no cure, no reliable cure, can be found for any of them, and the only course open to the gardener is to ensure freedom for his plants by first-class culture coupled with extreme care at all times. Fresh turfy loam, or sterilised composts where extensive supplies of new material are not available, is the first great desideratum. Since the seeds carry spores of the diseases, clean seed or sterilised seed is almost essential, and when the plants are in active growth, health, vigour and sturdiness must be secured at all costs. A close, stagnant atmosphere in the greenhouse is most inimical to the health of the plants, and good feeding, but not "high" nitrogenous feeding, will be found to bring success. At the end of the summer, when the weather may chance to be close and "muggy," keep a little heat in the pipes to assist the air currents, to maintain a clear, buoyant atmosphere, and to banish that dank, stuffy, moist air that is the very harbinger of disease.

Black Spot.—This fungus (*Macrosporium Solani*) also attacks the Potato and causes the foliage of those plants to curl. In the Tomato the fruit is most commonly attacked, but a careful examination of the plants will probably show black or brown blotches on the stems and leaves. The disease generally begins as a pitted black spot near the eye or top of the fruit, and it spreads in rings, which are covered with a black velvet skin. Infection can only take place through a wound of the fruit; hence overfeeding leads to prevalence of the disease, since it induces cracks in the ripening Tomatoes. Avoid applying liquid fertilisers made from fresh manure, pull off fruits which show the fungus, and use them as soon as possible. Keep the place well aired

and fairly dry. Moist, stagnant atmosphere causes the spores to spread.

Black Stripe.—This is another very common disease difficult to get rid of once it finds a place inside the greenhouse. It appears at the lower parts of the plant first, but soon spreads upwards, first along the stem and then over the leaves. Do not scrape off the black streaks, for by this you are merely sowing the spores. Plants, especially when sprayed with fungicide, frequently recover, but never do well. The best plan is to dispose of any infested plant, to spray surrounding specimens with fungicide, and to dress the soil round about with quicklime.

Leaf Rust.—This disease is not so common as either of the above. It is characterised by yellow or light brown patches spreading over the leaves, which are really colonies of a fungus known as *Cladosporium fulvum*. This rust is fostered by bad ventilation and too much foliage on the plants. Defoliate a little more freely to allow free play of air among the plants, be sure to burn badly infested leaves, and, if the rust is again noticed, use a fungicide.

Sleepy Disease.—This disease—and a destructive and quick-acting one it is—makes its presence

soil should be dressed with quicklime and sterilised in the winter, or new compost replaced.

Bacteriosis.—This disease is held to be caused by a bacterium called *Bacillus solanacearum*, which also attacks the Potato. Tomato plants attacked by it begin to droop and die at the top. The disease gradually works its way down the plant, the leaves curl up and become marked with yellow spots. The fruits are attacked eventually, and soon the whole plant is useless. Burn all attacked plants, for there is no cure. The germs may be carried by insects from one plant to another, so use the liver of sulphur solution mentioned below immediately the presence of the bacillus is suspected. Bordeaux mixture, with half an ounce to an ounce of copper sulphate per gallon, is a good fungicide; but almost equally efficacious is liver of sulphur solution containing an ounce of that chemical and four ounces of soft soap in every two gallons. The Board of Agriculture recommends the admixture of an ounce of Paris Green with every ten gallons of Bordeaux mixture used in the case of bacteriosis.

A perusal of these brief notes shows the wisdom of careful work on scientific lines. Prevention must ever be the fetish of the Tomato-grower,



DIANTHUS NEGLECTUS, A SPECIES WITH LARGE BRIGHT CARMINE FLOWERS.

known by a sudden drooping of the foliage from no apparent cause, followed rapidly by the death of the plant. The stems near the soil appear covered with a dense white mould, turning brown in time. If the skin is removed from the stem, it is found to be black or brown underneath, and a section of the stem shows the internal tissues to be in a very unhealthy state. All suspected plants should be isolated immediately and burned if it turns out to be a case of sleepy disease. There is absolutely no cure, but the

for only in that way can he ever hope to secure the acme of success.

H. H. A.

AQUILEGIA STUARTII.

Of the many beautiful garden subjects which the Aquilegia family provides, few can compare in grace of form and delicacy of colouring with Stuart's Columbine. This dainty plant is said to be a hybrid between *A. glandulosa* and *A. Witmannii*, and was raised by Dr. Stuart. The

flowers have sepals of a clear full blue, while the petals forming the cup-like corolla are cream. The foliage is neat and dwarf, slender stalks holding aloft the delicately poised flowers, which are of very considerable size. This *Aquilegia* is said to come true from seed, but as I have not raised this form I cannot speak from experience. From the results I have had in raising other species of Columbine, however, I should consider this a remarkable feature in a family so prone to hybridise. My experience with the lovely *A. alpina* is that, if fortunate, one in a hundred seedlings *may* be something like the plant. The strongest plants usually follow sowing *in situ* and thinning out to prevent overcrowding, while a cool, deep, well-drained, gritty compost appears to be relished.

Other particularly attractive Columbines for some cool ledge in the rock garden are *A. cærulea*, a lovely blue, long-spurred species from the Rockies; *A. canadensis*, scarlet and gold, and its nana form; *A. chrysantha*, which sometimes attains a height of 3 feet 6 inches and is of a soft yellow and pink tone; and *A. pyrenaica*, a dainty Columbine resembling *A. alpina*, though paler in colour and rather dwarfer. The accompanying illustration indicates how attractive an irregular group of *A. Stuartii* may be when introduced in the neighbourhood of dwarf shrubs on some stony ledge in the alpine garden. R. A. MALBY.

SUMMER-FLOWERING MAGNOLIAS.

ALTHOUGH the summer-flowering Magnolias fail to produce the wonderful profusion of bloom which is such a characteristic feature of the earlier-flowering kinds, their blossoms are wonderfully beautiful, and in some instances they are borne over a period of several months. Unfortunately, the plants are, like their



AQUILEGIA STUARTII, A BEAUTIFUL HYBRID COLUMBINE WITH BLUE AND CREAM COLOURED FLOWERS.

earlier-flowering relatives, unsuitable for the colder parts of the country, and for that reason they are sometimes thought to be more tender than they really are, and are therefore excluded from gardens where they might reasonably be expected to thrive.

Sweet soil on the moist side and fairly free from lime suits them admirably, perhaps the most satisfactory rooting medium of all being formed by digging a little peat and leaf-mould into light loam.

Magnolia grandiflora is one of the most important summer-flowering species, for it is worth growing both on account of its fine flowers and hand-

some evergreen leaves. A native of the Southern United States, it is there known as the Bull Bay, and grows into a tree of timber size. Here it varies a good deal, according to the position it occupies. In the South and West Counties it is a familiar object as a large bush or small tree in the open ground, but in other places it is usually planted against high walls. In either position it is an eminently satisfactory plant, for its fragrant white flowers, which are often 9 inches or more across, are borne from early July until late September. The leaves on different plants vary in character. As a rule they are oblong in form and from 7 inches to 10 inches long, thick and leathery. Some, however, are covered by a dense, reddish brown pubescence on the under surface, while others are quite plain, intermediate kinds also being found. Several forms have been selected for varietal names. The best of all is *gloriosa*, a form with shapely leaves and large, handsome, cup-shaped blossoms, the petals of which are conspicuous by reason of their beautiful shape and the purity of their colour. *Angustifolia* and *lanceolata* are distinguished by their narrow leaves, *ferruginea* by the reddish under surface of its foliage, *undulata* by the undulating margins of its leaves, and *variegata* by its variegated leaves. The last named cannot be very highly recommended.

M. hypoleuca is a handsome deciduous tree from Japan. In that country it grows 70 feet or 80 feet high, but it has not attained half that height in this country up to the present, and good examples are rare. In leafage it most closely resembles the North American *M. tripetala*, the leaves being very large and handsome. The flowers are, however, more attractive than those of that species, for they are larger, more fragrant, and the petals of greater substance. The petals are alternately white and cream, and the stamens crimson. Expanded flowers are often 8 inches across. The bright red fruits are also of great decorative value.

M. Fraseri is one of the better-known kinds from the Southern United States, where it forms a tree quite 40 feet high. Here it often develops with a short trunk and large rounded head. Its



THE SWAMP BAY MAGNOLIA (*M. GLAUCA*).

handsome deciduous leaves are often over a foot long and 7 inches or 8 inches wide, while its creamy white or pale buff, fragrant flowers are from 6 inches to 8 inches in diameter. It may be considered as one of the hardier sorts.

M. glauca, sometimes called the Swamp Bay or Laurel Magnolia, may be either evergreen or deciduous, according to the locality from which the seeds were derived. It has a wide distribution in the United States, and plants from the more southerly limits are usually evergreen. Here it forms a bush 12 feet or 15 feet high, with oval leaves 3 inches to 5 inches long, the upper surface green and the under side glaucous. The white, cup-shaped flowers are between 2 inches and 3 inches across, and borne over a period of quite three months.

M. macrophylla is one of the aristocrats of the family, not only in flowers, but in foliage also. In its home in the Southern United States it grows into a large tree, but there are few really fine examples in this country, the best being in the garden of H.R.H. the Duchess of Albany at Claremont. The leaves of this species are sometimes 18 inches long and 8 inches or 9 inches across, bluish green above and silvery beneath. The fragrant flowers are pale yellow or deep cream in colour and 9 inches or more across. It is not very hardy in a young state, but after the first few years it appears to be better able to withstand cold.

M. tripetala, the Umbrella Tree or Elkwood of the United States, is also a decorative tree, for it has large leaves sometimes more than a foot long, and large white flowers, which are succeeded by showy red fruits. Between it and *M. glauca* a hybrid has been raised which is known under the name of *M. thompsoniana*. It is of rather loose habit and intermediate in character between the parents, perhaps more free flowering than either. The white blossoms are borne from June to August.

M. Delavayi is a new tree from Yunnan. In that country it grows upwards of forty feet high, but it is doubtful whether it will form a tree in this country except in the mildest localities, for it is not very hardy, even against a wall near London, the younger wood being liable to injury if a severe spell of frost is experienced. The

evergreen leaves are large and handsome, 7 inches to 12 inches long, 5 inches to 7 inches wide, and, on vigorous plants, of a bluish green colour. The creamy white flowers are 6 inches to 8 inches across, rather cup-shaped and fragrant.

M. acuminata, the Cucumber Tree of the United States, is perhaps the hardiest of all Magnolias, and at the same time the least ornamental. It grows into a tree 40 feet or 50 feet high in this country, with leaves 6 inches to 9 inches long and 3 inches to 5 inches wide, and

with small greenish flowers, which are succeeded by small Cucumber-like fruits; hence the common name. Closely allied to this is the smaller-growing *M. cordata*, also a native of the United States. Its yellowish flowers are more showy than those of the last named, but of no special merit. With the exception of *M. grandiflora*—the most important of them all by virtue of its beautiful flowers and handsome evergreen foliage—the summer-flowering Magnolias are not so well known as they should be.

ARCHES IN GARDENS.

WHEN suitably clothed with climbing plants, arches add considerably to the beauty of either flower garden or kitchen garden, always providing that they are suitably placed. It needs but a glance at the accompanying photograph, taken in Lady Clayton's garden at Harley-

ford, Bucks, to note how effectively an archway may be clothed even in a kitchen garden. In this instance the main walk in the kitchen garden is bordered with herbaceous flowers, and the effect is pleasing in the extreme. The wide arched openings in the walls, through which pleasant views are obtained, afford ample opportunity for the generous planting of suitable climbers. Clematis montana and various ornamental Vines, including Vitis purpurea and Ampelopsis hederacea, are used with delightful effect, mingled with Wistaria multijuga and W. sinensis. There is no lack of subjects suitable for planting in such situations, and in addition to those already mentioned the following are also to be recommended: Actinidia chinensis, one of the most beautiful of all hardy climbers in foliage, although the flowers are rarely seen; Aristolochia Sipho, or the Dutchman's Pipe, suitable for a warm aspect; Japanese and European Honeysuckles; Polygonum baldschuanicum, a beautiful climber from Bokhara, with a wealth of pink and white flowers, borne in June and again later in the summer; and Akebia lobata.

Roses are also well adapted for this purpose, and a suitable selection would include Alberic

Barbier, Rosa moschata alba, Rosa sinica Anemone (otherwise known as the Cherokee Rose) and Ards Rover. Such red-flowered varieties as American Pillar ought not to be grown against brick walls, for neither red nor pink flowers are seen to advantage in association with brickwork. With so wide a selection of climbing plants there is no reason why archways, with a little care in planting, should not be made both attractive and interesting at practically all seasons of the year.



ARCHWAY AND FLOWER BORDERS IN THE KITCHEN GARDEN AT HARLEYFORD.

ROSE-GROWING IN TOWN GARDENS.

THE removal of fading blooms, besides being necessary for the sake of tidiness, helps to conserve the energy of the plants, much of which is spent in the production of the flowers. In effecting this a certain amount of the growth is removed, so that a sort of secondary pruning takes place at this time of the year. It is sometimes a matter of difficulty for a gardener to know exactly how far the growths may be cut back. Those who like to gather their blooms naturally wish to have them with long stems, while others who prefer to see them in the garden are often loath to remove a fraction more of the wood than is necessary. There is no doubt that a wholesale stripping of the tree causes a loss of vitality, not only on account of the wasted sap,

thing in the nature of severe cutting is likely to lessen rather than increase the chances of good blooms in the succeeding crop.

A full-blown Rose is the favourite resort of earwigs, and these should always be looked for and destroyed as the flowers are gathered. One needs to examine the flowers night and morning for traces of these pests where they are numerous, for the damage they do is frequently very apparent if they are left undisturbed for a day. A good method of trapping these insects is to place a number of short lengths of hollow Bamboo cane upon the ground around the plants, and examine these each morning; but Rose petals are undoubtedly the finest form of "bait" for them, so one should make certain that none escapes when these are gathered. A particularly difficult pest is the earwig, and man seems to be almost the only destroying agency in our town gardens, for very few birds will eat them. Nature has a way of adjusting things, however, and, fortunately,

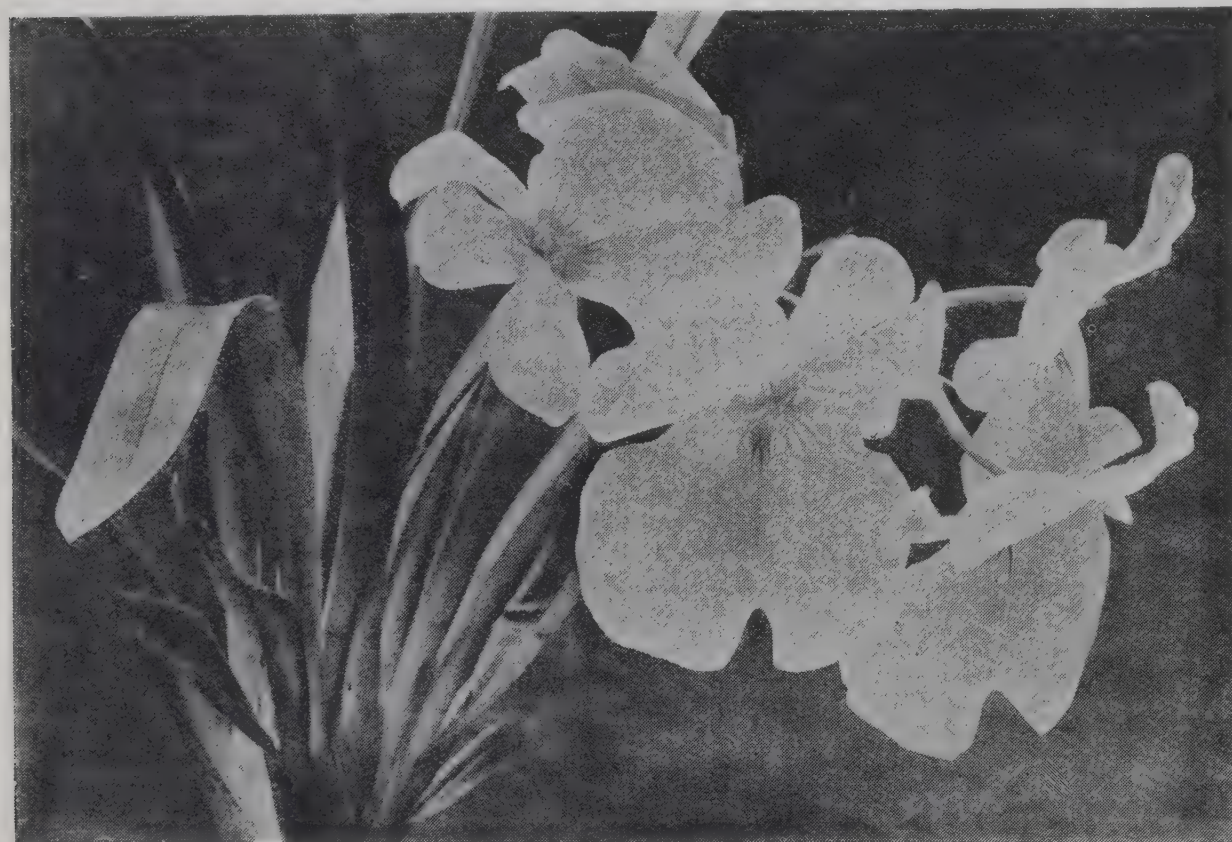
Cultivators should closely examine their plants. If they find the wood—stems—very hard now and the leaves small and tough, they should syringe the foliage heavily on every suitable day; if they find the stems soft and long-jointed, with very large, brittle leaves, then syringe much less frequently, as the proper maturing of the wood would be delayed too much. The object of the cultivator this month must be to promote a sound, healthy growth of plant, so that when the buds appear in August they will quickly develop, and also the surrounding shoots, to a stage when "taking" of buds will be work quickly carried out. Buds and shoots that are slow in developing to the stage when "taking" should be done usually mean short flower-stems, and short petals that are too narrow and too numerous when the blooms are fully out; but very frequently such buds never develop fully in the centre.

Early Feeding.—Very weak doses of clear soot-water and manure-water may be given as the roots fill the pots; but soot-water made from fresh soot and given very strong does much harm—it burns the tender roots. Clear liquid made from soot that has been stored in a shed for several months is the only kind fit to use. Dirty soot-water does harm, as the sediment blocks the pores of the soil.

Early Top-dressing.—This is very beneficial if done in the right way. Some very good loam must be passed through a half-inch-mesh sieve; treat half-rotted leaf-soil in a similar way; use two parts loam and one part leaf-soil. To a bushel of the combined parts add a peck of rotted manure, also sifted, a 6-inch potful of bone-meal, and a concentrated manure according to the instructions given with it. Now, instead of putting on the mixture in one thick layer, sprinkle on a little only—just enough to cover the surface soil in the pots, and then water through a rosed watering-can. In a few days' time, directly the young roots show through, put on another thin layer of the prepared compost. The cultivator can ascertain the true state of the soil below, as to whether it is dry or moist, by tapping the pots.

Side Shoots.—All side shoots must be pinched out while quite small, so as to concentrate the full strength of the plants in the main stems and leaves.

Premature Bud Formation.—Some varieties bear buds prematurely much more frequently than others. Any buds forming before July 25 must be removed at once, unless they are borne on very late-flowering varieties, such as the Hon. Mrs. Lopes; then, gradually "take" the buds, as later-formed ones would be useless if these are removed. On earlier varieties July buds must be removed, as those appearing at the end of August will be of better quality. AVON.



MILTONIA VEXILLARIA REV. W. WILKS

but because of the check which it gives to the roots. On the other hand, if only the stem of the flower is removed, the result is a superfluous number of weak, crowded shoots, which it is desirable to avoid. One may usually cut away about half the growth with safety, of course using discretion in doing so. There may, for example, be other buds which it is desired to see flower, in which case one would naturally sever the shoot at a point which would allow of this. It is also essential to bear in mind the future shape of each tree, and one should therefore cut to an outward eye.

Now that the first crop of bloom is past, it is a good plan to go over the trees carefully and slightly trim those that require it. Weak shoots which have come blind should have been removed in their earlier stages, but some are apt to get overlooked, and these ought to be cut out. The aim should be always to keep the centre of each plant open, and the timely removal of a few thin and useless branches will often help in doing so. But there should be no "hacking" of the plants, for any-

the winter proves fatal to most of them, or we should be overwhelmed. P. L. GODDARD.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

IN July, especially towards the end of the month, the plants grow freely if the roots are in a suitable medium. It is a fact that Chrysanthemums make very strong growth towards the end of the summer; more, it seems, in comparison, than in their early stages. The plants thrive best in a cool temperature; although they make rapid growth in spring if subjected to much heat, the quality of the shoots is very poor. As the dewy nights come, so do the plants thrive. In the absence of rain and dew, syringing late in the afternoon on fine days will prove very beneficial. Syringing would chill the plants if done in cold, dull weather.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Gladiolus Eldorado.—A variety of merit and distinction. The large, widely expanding flowers of soft canary yellow tone are rendered conspicuous by bold, irregular blotches of reddish crimson on the lower petals. We recall nothing so remarkably distinct and good. Exhibited by Messrs. James Kelway and Son, Langport.

Michauxia Tchihatcheffi.—A remarkable plant of the Bellflower Order, from Asia Minor, of somewhat difficult or at least uncertain cultivation.



NEMESIA MARSDEN JONES' STRAIN.

The white, horizontally disposed flowers are borne in a close spicate raceme, though branching freely at the base in good specimens. The woolly leaves are toothed, the barren rosettes lying almost prostrate on the ground. Shown by Miss Willmott, Great Warley.

Nemesia Marsden Jones' Strain.—In this case the award was made to a strain characterised by large flowers of red and crimson shades over a golden ground colour. In some the upper lobes of the corolla are almost wholly crimson, in others they are crimson, chequered with gold. A very beautiful race. From Mr. E. Marsden Jones, Malpas.

NEW ORCHIDS.

Three first-class certificates were awarded for novelties of unusual interest. Mr. J. Gurney Fowler of Brackenhurst, Pembury, Kent, showed *Miltonia vexillaria* Rev. W. Wilks, with immense pale pink flowers nearly five inches in depth and over three inches across. It was raised by crossing *M. v. gigantea* with *M. v. Queen Alexandra*. Mr. F. Montieth Ogilvie, The Shrubbery, Oxford, showed a magnificent variety of *Odontoglossum percultum* named King George; but the greatest triumph among new Orchids was the bigeneric hybrid *Odontonia Charlesworthii*, from Messrs. Charlesworth and Co. This is unquestionably the finest *Odontonia* yet raised, the lip being bright purple red and the petals deeper red. Parentage: *Odontoglossum Uro-Skinneri* × *Miltonia vexillaria*.

An award of merit was granted to *Brasso-Cattleya Ilene* The Dell Variety, shown by Baron Schröder, The Dell, Englefield Green.

The foregoing awards were made at the fortnightly meeting of the Royal Horticultural Society on July 14.

ROSE MAJESTIC.

This was one of the most fragrant of the gold medal Roses at the National Rose Society's summer show held recently in Regent's Park. As described in last week's issue, it is a Hybrid Tea of vigorous, upright habit, with stout, spiny stems. The large, well-formed flowers are of a glowing soft vermillion pink. It was shown by Messrs. William Paul and Son, Limited, Waltham Cross, Herts, and is quite an acquisition for either garden or decorative purposes.

A FEW GOOD FORCING ROSES.

NOW that Rose forcing is over, it may be useful to look back and form conclusions of what proved of most service during the winter and spring. Many old favourites are still unbeaten, but I can give the highest praise to the following from among our newer varieties:



THE NEW ROSE MAJESTIC.

Melody has jumped to the front as a reliable forcer, so much so as to already figure among the few varieties regularly grown for market purposes, which in itself is the best possible proof as a reliable one for early culture. This is one of the best pure saffron yellows we have, being very rich in the centre, with clear primrose yellow edges. The flowers are invariably carried bold and upright upon a stiff stem, open well, retain their exquisite form for a long time, are very freely produced and sweet-scented. This is also a grand Rose for the open air, particularly as a bedder. It is claimed to be mildew-proof, and has proved so with me, both under glass and outside, since its introduction in 1911.

Ophelia came from Waltham Cross a year later, and has taken a high position here. This is another splendid forcer and carries its flower well; free in every way, and also a good outdoor bedder. A clear salmon flesh centre shaded with rose, and altogether a great acquisition.

Lady Hillingdon is now by all generally known as a good forcer. It was recognised as such before its introduction, taking quite a front place among our market growers. It has good foliage and each flower is carried well; the colour is the most intense orange yellow while young, which it keeps better than most yellows. It has very long buds, and is one of the freest bloomers. It is likely to be one of the most extensively grown under glass, and is also much better in the open than was generally thought at its first introduction. It is indeed beautiful in the autumn.

Mme. Edouard Herriot has been exhibited well both last season and this. As a forcer it must be good, and cannot fail to prove a fine bedder. My own stock of plants are doing well, and where price is no great object I strongly advise a few being tried for winter forcing. Coral red, shaded with yellow and rosy scarlet. Not a full Rose, but very freely borne and opening well.

Sunburst is certainly one of the best of 1912. We seem to be minus the disappointment of pale-coloured flowers when forcing this variety. In the open it is not satisfactory until warm weather sets in, when it is among the best right up to the time of frost. A stout-petalled and beautifully carried bloom of clear orange yellow with a deeper centre, lasting well when cut young and retaining its colour. It is bound to become one of our most popular forcing varieties.

I am giving these notes early as a guide towards the selection and preparation of our best newer varieties for next winter's blooming, which should be taken in hand soon.

Uckfield.

A. P.



GLADIOLUS ELBORADO

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

The Early Vines.—Lateral growth may now be cut hard back, in order to expose the Vines to the sun, so that the wood may be thoroughly ripened. Examine the borders, and if necessary give a good soaking of water, previous to which a sprinkling of Thomson's Vine Manure may be applied.

Cucumber Plants for late autumn supplies should now be ready for planting. It is better to make several plantations during the season than to rely on plants which have become exhausted.

Melons.—The latest plantation of Melons may now be made, in order to produce ripe fruits in October. Plant 4 feet apart and secure the first batch of flowers.

Plants Under Glass.

Roman Hyacinths.—These are always welcome, and to have them early the bulbs should be potted with as little delay as possible. Do not make the soil too hard underneath the bulbs, but simply press them into the compost and make firm round them. After potting, they may be placed on a bed of ashes and covered with several inches of the same material, which should be passed through a fine sieve.

Poinsettias.—The earliest batch of plants can now receive their final shift into 6-inch or 7-inch pots, according to the state of the plants. Grow in a temperature of 70° and expose the plants to as much light as they will stand without flagging. Ventilation must be given to keep them from becoming too soft.

Salvia splendens.—Plants for winter flowering should now receive their final shift. Nine-inch pots will not be too large if the plants are growing freely. The soil may consist of three parts turfy loam and one part decayed horse-manure. Pot moderately firm and protect from heavy rain until the pots are well filled with roots, when they may be placed on a bed of ashes in the open garden until the weather becomes too cold at night.

The Flower Garden.

Pentstemons.—Some varieties are in full bloom, and should receive supports to keep them from injury by rough wind. Mrs. Fulford, a variety of recent introduction, is now throwing up strong spikes of rich red flowers of good substance and size. Stir the soil between the plants and give a top-dressing of decayed horse-manure with as little delay as possible. Liberal supplies of water may afterwards be given.

Gladioli.—These are making good, clean growth and pushing up their flower-spikes, which will require neat stakes to keep them in an upright position. Do not allow them to suffer from want of moisture at the roots, and, if dry weather sets in, a mulching of decayed manure will do much to keep them in a clean, healthy condition.

Sweet Peas.—As the flowers show signs of decay, they should be carefully removed from the plants before any seed-pods are formed, in order to prolong the flowering period as far into the autumn as possible, and with the same object in view frequent applications of manure-water may be given.

Spiræas.—*Astilbe palmata*, *A. Davidii*, *A. Queen Alexandra* and *A. Peach Blossom*, if planted in bold groups by the water's edge, present an imposing appearance; but unless the roots reach the water-level they must receive daily attention with the water-pot. They will also benefit by a mulching of some moisture-retaining material.

The Rock Garden.

Dianthi which are passing out of flower should be trimmed back, in order to produce stocky young shoots for propagation. *Dianthus alpinus*, a beautiful rock garden plant, may easily be increased in this way or by seeds, and should be planted in poor, moist soil, where it forms a dwarf, compact plant with flower-stems only a few inches long.

The Hardy Fruit Garden.

Apples, Pears and Plums are swelling fast, and trees carrying heavy crops require careful

thinning. For this purpose a pair of good scissors is the best implement. As this work proceeds, care must be taken to leave the fruits which are best placed with regard to sunshine. In the first place, all deformed fruits should be removed, leaving only such as will develop into good specimens and nothing beyond what can be brought to maturity without injuring the prospects for the following season. Many of the side growths may be shortened, in order to admit light and air to the middle of the trees and with a view to forming fruit-buds for another year. This shortening of the growths, if accomplished before this date, will sometimes cause new growths to break from the eyes, which are of no value and have to be cut away at a later date, thus defeating the object of forming fruit-buds.

The Kitchen Garden.

Turnips for Winter Supplies.—A good sowing of Turnip seed should be made now, and another in ten days' time. Allow 18 inches between the rows, as nothing is gained by overcrowding.

Spinach for Late Autumn Supplies may be sown at once, and for winter about the middle of August. Allow 18 inches between the rows for this crop, and thin out the seedlings to 4 inches apart as soon as large enough.

French Beans.—If cold pits are available, several plantations may be made during August for the supply of pods in October and November. The lights should be removed until cold weather sets in during the autumn.

Early Potatoes.—As soon as the skins are set, this crop should be lifted and stored for future use. The ground will then be available for Coleworts or other winter crops.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Runner Beans.—These are growing rapidly, and attention must be given to see that the vines are taking to their supports. If allowed to fall over, they get so entwined that it is next to impossible to do anything with them.

Mushrooms.—Preparations for a supply of Mushrooms in the autumn may now be made. Collect fresh horse-manure and have it placed in layers in a dry shed, where it should be turned each day. Meantime, opportunity can be taken to have the Mushroom-house thoroughly washed down and everything made ready for making a start.

Cucumbers.—Those growing in frames will now claim attention in the way of feeding and regulating the shoots. Endeavour to keep the foliage healthy, and cut the fruits regularly from the plants; otherwise, if allowed to mature, the plants soon show signs of exhaustion.

Lettuce and Endive should be thinned out to avoid crowding, and make another sowing of each for winter use. Where a sowing of Parsley was made at the beginning of June, the young plants ought to be ready for thinning. A number of these thinnings can be dibbled into frames; these will make nice plants before the winter, and will prove a very useful crop indeed.

The Flower Garden.

Layering Carnations.—In light, sandy soil it is sometimes not necessary to prepare it for this work, but on the whole it will pay to make up a light compost in which to put the layers. Should the weather be dry, give them a slight dewing in the evening. At the same time, my experience is that they root best in a dry season.

Hedges.—To keep hedges of Yew, Privet or Laurel in good condition, as well as from an ornamental point of view, they must be kept closely clipped. In the case of Laurels, it is most important to remember that they should never be trimmed with the shears, but always with a knife. It certainly takes much longer to do the work, but they look much better when finished, and there is no doubt it is better for the hedge.

Anchusas.—As the first flowers will be almost over, the flower-stems should be shortened back to where the new growths are appearing. These new growths will in a favourable season send up some nice flower shoots late in the autumn, which will give an added beauty to the herbaceous border and will associate well with the prevailing yellows of that season.

Lavender.—Where the flowers of this fine old-fashioned plant are required for household purposes, they should now be ready for harvesting. In this connection it is important to remember that they must be gathered before they are fully expanded. Tie them in small bunches and place them in a cool house, on a shelf which has previously been covered with paper, until they are perfectly dry.

Violas.—In a great many districts Viola cuttings will be difficult to obtain owing to the drought experienced lately. There is still time, however, to save the situation by going over the plants and removing all faded flowers. Give the plants a good soaking at the roots two or three times.

Plants Under Glass.

Deciduous Calanthes.—These should now be well rooted, and will require to be more liberally treated in the way of watering, and, if judiciously applied, a little weak liquid manure occasionally. But much damage may be done to the young growths if water is allowed to collect at the base. This must be guarded against at all costs.

Ferns for Bowls.—During the past year or two there has been an increasing demand for ornamental bowls filled with bulbs and small Pterises for blooming indoors during the winter months. For this purpose pot up the required number at once into 3-inch pots. The varieties *Pteris major* and *P. Wimsettii* are especially suited for this work. In most places no difficulty will be experienced in securing a sufficient number of plants from self-sown spores; if not, young plants can be purchased very cheaply from Fern-growers.

Stocks.—Some time ago I remarked on the excellence of these plants for providing a supply of cut flowers in the spring. The first sowing should be made without delay. The varieties I have found most suited for this work are *Princess Alice*, *Beauty of Nice* and, as a charming companion, *Emperor* (*Augusta Victoria*). Sow one or two seeds in small pots and place them in a cold frame, eventually thinning them to one plant in each pot, and from the very outset avoid anything in the nature of coddling. Pot on as required, and remember that they will amply compensate for a little extra care and attention.

The Hardy Fruit Garden.

Peaches.—The trees may now be gone over and all superfluous shoots shortened back. The growths that are to furnish the tree should be so arranged that the fruits will be exposed to the sun. It is surprising what a delightful hue Peaches in the open take on when exposed to the full glare of the sun; not only so, but the flavour is also much improved thereby.

Apples.—Trees which are carrying heavy crops must be assisted by frequent doses of liquid manure, and have a good mulching of manure placed over the roots.

Fruits Under Glass.

Vines.—Houses in which Grapes are beginning to colour should have air admitted top and bottom during the night, and at the same time keep up a little fire-heat. In order to prevent the inside border becoming dry, give a mulch of manure from a spent Mushroom-bed, or, failing that, meadow hay would answer the same purpose. Continue to remove lateral growths as they appear, and every means should be taken to keep red spider in check.

Tomatoes.—Where a supply of Tomatoes is desired during the winter, the seed should be sown without delay. As soon as the young seedlings appear, they must be placed close to the roof glass to prevent them becoming drawn. When the seedlings have been potted, place them in a cool house where they will have full exposure to light and air.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hoptoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SOLDANELLAS (M. W. S.).—It is obviously an instance of the development of latent flower-buds—a not unusual circumstance with many plants. In fruit trees, for example, both fruit and flowers are occasionally seen on the same spray, and your Soldanella with "ripe seed" (fruit) and "fresh flowers on the same stalk" is identical in principle. We did not understand that this was so from your former communication.

HEUCHERAS NOT FLOWERING (W. K.).—Have you any particular variety in mind? The only one having any pretensions to shy flowering is *H. sanguinea* in certain districts and in cold clay soils. There are varieties of it that are much freer flowering. All the plants grow freely in sandy loam, but, in addition, the one above referred to prefers also a rather warm, well-drained soil and situation. The forms of *H. gracillima* and the hybrids between this and the first named are proverbial for their free flowering; hence we imagine you must be dealing with a poor type of the original. The best methods of increase are by seeds and by division of the crown tufts in spring. The plants divide quite readily, and if firmly replanted in rich soil soon become established again.

PLANTS FOR BANK IN WOOD (A. H. R.).—You have obviously a good opportunity for some natural effects, though just what would be the best plants could only be accurately determined on the spot. In any case, we think you cannot err in planting the Winter Heath (*Erica carnea*) for winter and early spring, with also the taller-growing Portuguese Heath (*Erica lusitanica*) for later effect. Almost all the *Lastreas*, *Polypodiums* and *Athyriums* would do well in the sandy soil, provided also that the conditions are cool and the rooting medium fairly deep. We should hesitate before planting *Azaleas*, unless it was in or near woodland scenes. Almost all the fine-leaved Japanese Maples would do well in sandy, loamy soils, and you may select at will from golden, crimson and green leaved sorts, all of which are beautiful. The finer colour effects these afford are only secured by exposure to full light; shade is detrimental thereto. For the rest, you might plant a few of the more graceful Bamboos near the water, also *Spiraeas*, *Astilbes* and *Eulalias*. On the rough bank, if you discourage the Bracken and other wild material, many things might be grown. Double Gorse and some of the Brooms would be effective, and Foxgloves might prove very charming. It would require a more intimate knowledge of the spot and your own intentions in the direction of beautifying it to give a more definite reply.

TREES AND SHRUBS.

OLD HEATHS (A. K. M.).—The best thing to do with your old *Ericas* would be to destroy those which have outgrown their positions and have become bare towards the base. Such plants, if cut back, would not start away well, neither would they bear transplanting well. By starting again with young plants your bed would be far more satisfactory than at present. The best winter Heaths for your district are *Erica mediterranea* hybrids,

E. carnea and *E. carnea alba*; for spring, *E. mediterranea*; for summer, *E. cinerea* and varieties, *E. Tetralix* and *E. stricta*; and for autumn, *E. ciliaris* and variety *mawana*, *E. vagans* and varieties, *Daboecia polifolia*, and *Calluna vulgaris* and varieties.

DOUBLE LILACS AND SEED (J. G. N.).—It is not usual for double flowers to produce seeds, but in an inflorescence of usually double flowers some may be single or partly so, the reproductive organs being perfect. In such cases seeds may be produced, or, in some instances, the ovaries may swell up without maturing seeds. The fruits of the Lilac heads similar to the one sent for examination will not mature after the flower-heads have been removed, and if kept they will be of no use.

A WINTER-FLOWERING CLIMBER (T. W.).—If you wish for a winter-flowering climber, you cannot do better than select *Jasminum nudiflorum*, for it blossoms for about two months from December onwards. If, however, you prefer a plant to bloom in May, use *Clematis montana rubens*. It is a vigorous kind, which does not suffer from disease, as many kinds do, and it blossoms freely. If you obtain a plant in a pot, it may be planted any time; otherwise in October. You may plant Ivy against your wall in October.

ROSE GARDEN.

PINK GLOIRE DE DIJON (H. G.).—Yes; there is a Rose named Kaiserin Friedrich that bears flowers much like Gloire de Dijon, only that they are shaded with pink. If, as you say, one shoot bears flowers of a good pink colour, you should bud from this shoot. Ask some local gardener to bud it for you on to a Briar, or even on to another Rose. You could put cuttings in also from the half-ripened wood. Put the cuttings under a hand-light in the shade, using nice sandy soil to place them in.

TWELVE FRAGRANT AND FREE-BLOOMING ROSES (Pauvret).—An excellent selection would be as follows: Mme. Abel Chatenay, Mme. Ravary, Pharisier, General Macarthur, Duchess of Wellington, Lieutenant Chauré, Liberty, Laurent Carle, Viscountess Folkestone, Mrs. John Laing, Mrs. Walter Easlea and Hugh Dickson.

FRUIT GARDEN.

CANKER IN APPLE TREE (Gera).—Yes; your Apple is badly attacked by canker. The affected portions should be cut out as soon as possible and the wounds painted over with lead paint or tar, otherwise the disease is bound to spread. You will find a long article dealing with this disease in a recent issue.

PEACH MILDEW (H. C. N.).—The Peach is attacked by Peach mildew. Keep the house well ventilated, and, if the disease spreads, spray with a solution of potassium sulphide, at the rate of 1oz. to four gallons of water, in the evening. The Rose has apparently suffered a check during its development, and has subsequently grown on.

FIG TREE CASTING ITS FRUIT (S. R. J.).—We think that the tree must now be at the flowering stage. If this is so, it is nothing unusual for a tree to cast a few fruits at this time. If the tree casts all its fruit one year after another, then there must be something radically wrong in your mode of culture. Generally the failure arises from the fact of the tree being too heavily furnished with branches and foliage during the summer. You must remember that the fruit of next year is borne on the branches of this year's growth. If this is not properly developed and nurtured by exposure to all sunshine, light and air possible, then it cannot bear fruit. If your tree is at all overcrowded with branches of this year's growth, do not hesitate a day in cutting out the weakest to give the others a better chance.

GRAPES BADLY SHANKED (Thaley Park).—The Grapes were a rotted pulp when received, and the letter steeped in the same, making it difficult to decipher. Yours is a bad case of shanking—caused, we think, by serious root trouble. How this has been brought about it is difficult for us to know, but most likely by applying too heavy doses of artificial manure. These manures are valuable and indispensable helps when applied with discretion and knowledge in the growth of Grapes; but when applied in too heavy dressings, then they do incalculable harm. We believe that you will find many of the roots have collapsed, and are more or less dead. To bring the Vines round, your best plan will be to lift the roots to within 2 feet of the wall of the vinery and thoroughly examine them, cutting away the weak and impaired, and relaying the rest in a new border made of best Vine-growing compost. You will soon get your Vines round by doing this, and in no other way.

ABOUT APPLE TREES (Shirley).—The Apple foliage and fruit are both attacked by aphides, and it is these which are causing the red coloration on both. Spraying with quassia and soft soap, with nicotine, or with one of the proprietary sprays that are so numerous, and many of which are good, in early spring would reduce the attack markedly. The shoot of Apple Mannington's Pearmain is attacked by Apple mildew, and no amount of spraying is likely to cause its disappearance, as the fungus is perennial in the tissues of the Apple shoots. The only method to adopt is to prune away and burn the affected shoots in early spring as soon as they can be seen. Spraying for Codlin moth is not likely to be an effective preventive unless a food poison spray is used and sprayed forcibly on the fruit so that it enters the eye of the Apple. Quassia and nicotine are not food poisons; the best is lead arsenate; lead acetate should not be used. Codlin moth is rather an uncommon pest in this country at the present time, and the depredations of the Apple sawfly are often mistaken for it. Spraying may check this to a slight extent, but

the best check is imposed by the prompt collection of fallen fruits and their destruction by fire.

MISCELLANEOUS.

INJURY TO SWEET PEAS (A. R.).—The material sent is insufficient to enable us to diagnose the disease. Please send a complete plant.

GRUBS FOR IDENTIFICATION (A. F.).—Neither of the grubs sent is harmful. The active one is the larva of one of the ground beetles, and feeds on other insects. The other is the larva of a two-winged fly, which feeds on vegetable refuse.

CABBAGE ROOT MAGGOT (Mrs. E.).—The little whitish maggot is the Cabbage root maggot, which is often very troublesome through attacking Cabbages, Cauliflowers, and other plants belonging to the Cabbage family. The best thing to do to protect the plants from the maggot is to dust sand, damped with paraffin, along the rows. This will help to keep the parent fly from laying her eggs, and so prevent the attack of the pest. The other grub is the wireworm, and for this constant hoeing is necessary. Where there are plants which need protection in wireworm-infested ground, a piece of Potato or Carrot may be buried with a stick marking the spot. Examine it at frequent intervals and destroy the captures.

NAMES OF PLANTS.—W. J. H.—Roses: 1, fallen; 2, Mme. d'Arblay; 3, Joseph Lamy; 4, Rosa lucida plena; 5, Paul Transon; 6, Mrs. Waterer.—**E. W. N.**—Both specimens of *Centranthus ruber* are typical examples of the species. It is not unusual for some variation of colour to occur. Both shades are often seen. The *Rhododendron* is *R. azaleoides*, a hybrid between an evergreen *Rhododendron* and a deciduous species of *Azalea*.—**H. Ongar.**—Roses: 1, Margaret Dickson; 2, Baroness Rothschild; 3, Rev. Alan Cheales.—**A. M. B., Longformacus.**—Rose *Euphrosyne*, *Salvia* *Grahamii* and *Serapias Lingua*.—**Mrs. D., Salisbury.**—1, *Campanula rapunculoides*; 2, *C. alliariaefolia*; 3, *C. linifolia*.—**N. Y.**—1, *Galium verum*; 2, *Selaginella Braunii*; 3, *Selaginella* species, cannot identify, too scrappy; 4, *Helxine Solierii*; 5, *Sedum rupestre*; 6, *S. acre*.—**Wild Flowers.**—1, *Hyoscyamus niger* (Henbane); 2, *Erythraea Centaureum* (Centaury); 3, *Ononis spinosa*; 4, *Galium Mollugo*; 5, *Senecio Jacobaea*; 6, *Agrimonia Eupatoria*; 7, *Lotus uliginosus*; 8, *Hypericum quadrangulare*.—**Burton.**—*Monarda didyma*.—**T. M., Bridport.**—A garden escape, native of North America.—**E. M. H.**—*Spiraea arborescens*.—**S. H. B.**—*Carlina acaulis caulescens*.—**P. A. Sturge.**—1, *Verbascum Lychnites*; 2 and 3, two seedling forms of *V. densiflorum*; 4, *V. Chaixii*. Specimens of *Verbascums* should include mature leaf in order to identify with any certainty.—**B. Cummings.**—1, *Sedum rupestre*; 2, *S. reflexum*; 3, *S. hybridum*; 4, *S. roseum*; 5, *S. Anacamposeros*; 6 and 7, forms of *S. spurium*; 8, *S. album*; 9, *Arenaria montana*.—**Constant Reader.**—The yellow flower is *Lysimachia thyrsiflora*; the Rose Fellenberg.—**Mac, Deal, Kent.**—Roses: 1, Newport Fairy; 2, Excelsa.

SOCIETIES.

NATIONAL SWEET PEA SOCIETY'S SHOW.

THE fourteenth annual exhibition in connection with the above society was held in the Royal Horticultural Hall, Vincent Square, Westminster, on Thursday, the 16th inst. On account of the dry weather and the rather late date of the show, a number of big seed firms, notably Messrs. Sutton and Sons, Messrs. J. Carter and Co., Mr. W. J. Unwin and Messrs. R. H. Bath, Limited, were unable to stage their customary groups. Taking all things into consideration, however, the show was a very good one indeed, and attracted a large number of visitors during the afternoon. The new secretary, Mr. H. D. Tigwell, had made excellent arrangements.

NON-COMPETITIVE GROUPS.

These, as usual, were arranged around the walls of the hall, and constituted an ideal setting to the gems of the moment. There were some fourteen or fifteen of these groups, which were virtually a show in themselves.

Taking the groups in order, we first came to that of Messrs. E. W. King and Co., Coggeshall, Essex, who arranged a collection of the flowers in considerable variety and beauty. It would have been better, we think, had the flowers been staged lower down. The beauty of the Sweet Pea cannot be estimated at 10 feet high. The collection was quite a representative one.

Robert Sydenham, Limited, Birmingham, had a prettily arranged group, using rustic and other vases of an artistic nature. The arches of Princess Mary (deep blue) and R. F. Felton (reddish mauve) were very nice. Robert Sydenham (orange scarlet), Lillian (pink) and Barbara (pale orange) were also excellent.

Messrs. Bide's (Farnham) arrangement consisted of rather high-placed arches ornamented by *Smilax*, with occasional vases of Sweet Peas. Lower down, vases of the flowers ornamented with *Asparagus Sprengeri* were the rule. Of these Princess Mary (blue), Mrs. Breadmore (cream) and Phyllis Bide (scarlet) were the best.

Hobbies, Limited, Dereham, also arranged arches of the flowers with vases below. The latter contained some excellent examples, Marjorie Linzee (rose cerise), Thomas Stevenson (orange), Mrs. Hugh Wormald (pluk and cream) and Dorothy (rose and mauve) being good.

Rural floral decorations were arranged by Mr. Fred W. Wood, Waltham, S.E.

Messrs. Jarman and Co., Chard, displayed a representative lot of the flowers of good quality, R. F. Felton, Elsie Herbert, Lavender G. Herbert and Hercules (pink)

being good. This group was ornamented by sprays of the fragrant *Humex elegans*.

Messrs. Dickson, Belfast, had some excellent flowers in a rather high-placed arrangement. Their vases of Hilary Christy (rose and orange), Dobbie's Cream, Maud Holmes (of which pillars were formed), Seamew (pale mauve), Barbara (orange) and Orchid (mauve and rose) were very fine. Blue Picotee, King White and Thomas Stevenson were also notable examples in a fine lot.

Mr. James Box, Hayward's Heath, had an excellent arrangement of the flowers in conjunction with high quality. Against a background of velvet three bold vases were arranged with trails of Smilax and light Grasses. The effect was decidedly good, the grouping being light, yet telling. James Box, Elfrida Pearson, Lindfield Grey, Afterglow, Edna May Improved and Dobbie's Cream were very fine.

Messrs. C. C. Morse and Co., San Francisco, California, showed the new Sweet Pea Margaret Atlee, a delightful flower in pale and rose pink shades. A superb lot of the flowers was displayed.

Messrs. Dobbie (Edinburgh) staged, as usual, a particularly fine lot against a background of velvet festooned by Smilax. The flowers were very fine. The bolder vases we thought a little too massively arranged. Dobbie's Cream, Mrs. Heslington, Alfred Watkins (lavender), Queen of Norway (rosy mauve), Red Star, Nora Unwin and Thomas Stevenson were the finer lots in a very telling exhibit.

Mr. Robert Bolton, Carnforth, had a nice arrangement of flowers opposed to a rather weak pale green background. The flowers, too, were less fine than we are accustomed to see from this exhibitor.

Mr. H. J. Damerem, Hayling Island, Hants, also contributed a small group of these flowers.

COMPETITIVE CLASSES.

In Class 1, for eighteen bunches, distinct, three competitors came to the front, the first prize, the Sutton Cup, going to Mr. A. E. Usher, Ranston Gardens, Blandford, who staged an admirable lot of flowers. His collection comprised Maud Holmes (crimson), May Campbell (rose and cream), Mrs. Cuthbertson (apple blossom rose), Prince George (rose and salmon), Edith Taylor (rose), Lavender G. Herbert, Barbara (orange), Dobbie's Cream, Mark's Tey (red and violet), W. P. Wright (lavender), Princess Victoria (pink), White Queen, Thomas Stevenson (orange), Edrom Beauty (orange and rose), Agricola (pale pink) and King Manoel (maroon). A magnificent set of varieties. Second, Mr. E. R. James, gardener to Lord North, Wroxton Abbey, Banbury; third, Mr. J. Stokes, Lyme Regis.

For the Henry Eckford Memorial Cup, twelve bunches distinct, eight competitors contested, the premier award going to Mrs. A. V. Macnamara, Ennistymon, County Clare, Ireland, whose excellent group was made up of Orange Perfection, Mrs. Harcastle Sykes, Sunproof Crimson, New Marquis (purple), Orchid (rosy mauve), Illuminator (scarlet), Thomas Stevenson (scarlet orange), Elsie Herbert (pink and white), Hercules (rose), Audrey Crier, Wenvoe Castle (violet and rose) and King Manoel. Second, Mr. T. Stevenson, gardener to Mr. E. G. Mocatta, Woburn Place, Addlestone, whose admirable lot was made up of Lavender G. Herbert, Thomas Stevenson, King Manoel, R. F. Felton, Elsie Herbert, Hercules, Orange Perfection, New Marquis, Edith Taylor, William Cuthbertson, King Edward Spencer and Mrs. C. W. Bredmore. This was a splendid exhibit, a very close second to the excellent collection from Ireland. Third, Miss Scrivens, Bexhill-on-Sea.

In Class 3, for six distinct bunches selected from varieties put into commerce since autumn, 1912, only four lots were staged, the first prize going to Mr. T. Jones, Ruabon, whose collection comprised Illuminator, King White, Agricola (pink), Lavender George Herbert, Mark's Tey and Thomas Stevenson. The varieties were shown in his inimitable style. Second, Mr. E. Cowdy, Loughgall, County Armagh.

Class 4, for three bunches, was only poorly represented. Mr. Lewis S. Peters, St. Austell, Cornwall, had Lilian, Hercules and Gladys Burt, all very good.

In the open classification class, Class 5, for a collection of eighteen varieties, five competitors put up excellent groups, the premier prize going to Mr. E. Keith, gardener to Sir G. O. Trevelyan, Bart., Wallington Hall, Cambs, whose best were Barbara, Dobbie's Cream, Hercules, Mrs. Hugh Dickson, Mark's Tey, Agricola and R. F. Felton. The flowers generally were not of high excellence. Second, Mr. A. Shkelton, Forde Abbey Gardens, Chard.

For twelve bunches of Sweet Peas, distinct, open to all, five exhibitors staged collections of the flower, Mrs. A. V. Macnamara, County Clare, Ireland, leading the way with a fine assortment, Radiance, Barbara, Margaret Atlee, Mrs. E. Cowdy, Mrs. C. W. Bredmore, Lavender George Herbert, Wedgwood, Mrs. Harcastle Sykes, Sunproof Crimson, King White and Rosabelle comprising the collection; an admirable set, well coloured and handsome spikes. Second prize, Miss Scrivens, Millfield, Bexhill-on-Sea, who also had a lovely lot of flowers.

For twelve bunches of Sweet Peas of lavender, cream pink, scarlet and orange, only one exhibitor, Mr. A. E. Usher, staged, and was awarded first prize.

In Class 8, for eighteen bunches of Sweet Peas suited to garden decoration, two exhibitors staged collections, the first prize going to Mr. A. E. Usher, gardener to Sir Randolph Baker, Bart., Blandford, whose excellent group contained Thomas Stevenson, Clara Curtis, Lavender George Herbert, W. P. Wright, Duplex Spencer and Tennant Spencer. Second, Mr. J. T. Tigwell, Greenford, Middlesex.

For the E. W. King Challenge Cup, for twelve waved varieties, distinct, there was a strong competition, eight exhibitors staging collection. The first prize went to

Mr. E. Cowdy, Loughgall, County Armagh, whose best were Lavender George Herbert, Mary Unwin, Mark's Tey, R. F. Felton and Mrs. H. Sykes. Second, Mr. Lewis Peters, St. Austell, Cornwall.

DISTRICT CLASSES (TRADE EXCLUDED).

These were divided into two groups, the London and Scottish classes exhibiting six bunches each; the Irish, Welsh, Northern Counties, Western, Eastern, Midland and Southern Counties exhibiting nine bunches each.

In the London class, Mr. G. M. Morewood, Windmill Road, South Ealing, was first, having Maud Holmes and Thomas Stevenson as his best. There were five competitors.

In the Scottish class, Mr. J. A. Ginger, Forres, N.B., took first place, having superb vases of Margaret Atlee and Lavender George Herbert.

In the Irish class, for nine, only two competitors faced the judges, the first prize going to Mrs. A. V. Macnamara, Ennistymon House, County Clare, whose strong collection was made up of Mrs. W. J. Unwin, Radiance, Edrom Beauty, Maud Holmes and Helen Williams, among others. Mr. E. Cowdy was second.

In the Welsh classes, Mr. T. Jones led the way, his vases of Margaret Atlee, Dobbie's Cream, Melba, Elfrida Pearson and Hercules being particularly fine. Mr. L. Webb, Welshpool, was second.

In the Northern Counties class, Mr. E. Keith was first with an admirable lot.

In the Western classes, Mr. A. E. Usher took the lead with a superb lot.

In the Eastern Counties class, Mrs. A. Hitchcock, Tiptree, Essex, took premier place. There were ten competitors in this class, the flowers being very good.

In the Midland Counties class only two competitors staged, the first prize going to Mr. E. R. James, Wroxton Abbey Gardens, Banbury, for a very fine lot.

In the Southern Counties class, for which the first prize was a piece of plate, value three guineas, offered by the Proprietors of THE GARDEN, there were six competitors, the first prize being awarded to an admirable lot from Miss Scrivens, Millfield, Bexhill-on-Sea, whose collection of nine comprised Thomas Stevenson, Hercules, New Marquis, King Manoel, King White, Edith Taylor, Audrey Crier, Maud Holmes and Barbara. Second, Mr. T. Stevenson, gardener to E. G. Mocatta, Esq., Addlestone, who also staged a very fine collection.

In the Burpee Cup class, for a display of waved Sweet Peas, to be arranged on a table space 8 feet by 3 feet, only one competitor, Mr. T. Stevenson, gardener to E. G. Mocatta, Esq., Woburn Place, came to the front, the exhibit, in our opinion, being rather crowded. The best vase was Thomas Stevenson. New Marquis, King Manoel, Marjorie Linzee, Prince George and Lavender George Herbert were also good.

For the Horace Wright Challenge Cup, twelve bunches, distinct, five competitors staged collections, the premier award going to Mr. W. H. Holloway, Port Hill, Shrewsbury, whose dozen was made up of Thomas Stevenson, May Campbell, Elsie Herbert, Ivanhoe (blue), Clara Curtis, Rosabelle, Agricola, King White, Mark's Tey, King Manoel, Hercules and Sunproof Crimson. Mr. C. R. Jaggs, Vicarage Cottage, Hertford Heath, was second.

For the Walter Voss Challenge Cup, for six distinct varieties, to represent six different colour classes, five competitors staged collections, the premier award going to Mr. W. H. Holloway, Portyville, Port Hill, Shrewsbury. His set was Lavender G. Herbert, Agricola, Hercules, Elfrida Pearson, King Manoel and Rosabelle. Mr. C. R. Jaggs was second.

NEW SEEDLING VARIETIES.

Fiery Cross (vivid scarlet cerise), raised by Mr. A. Malcolm, Duns, to be introduced by Messrs. W. Atlee Burpee and Co., was given an award of merit and reserved for the silver medal, 1915.

Royal Purple and Jean Ireland (pink and cream), both from Messrs. Dobbie and Co., also received awards of merit. These had been grown at the Society's trials, and the awards were made by the floral committee.

TABLE DECORATIONS.

In Class 36, for a table decoration 3 feet in diameter, there were fourteen competitors, the first prize deservedly going to an exquisitely beautiful and tasteful arrangement from Mrs. A. G. Gentle, Little Gaddesden, Berkhamsted, who employed cream-coloured Sweet Peas in conjunction with the lightest of grasses, and touches of bronzy foliage and Acacia cultriformis. Second, Mrs. Alex. Robinson, Carshalton.

In Class 37, for an epergne or stand, there were fifteen exhibitors, Mrs. A. D. Ruff being awarded first prize.

NATIONAL CARNATION AND PICOTEE SOCIETY.

THE annual exhibition of the Southern Section of this society was held at the Royal Horticultural Hall on July 17. The show was a comparatively small one, its better phase being the long-stemmed flowers shown in vases. Those shown on cards, many distorted beyond measure, failed to arouse any enthusiasm.

For a stand of twelve Carnations on cards, bizarres and flakes, Mr. H. R. Taylor, Cheam, was first, having Opal, Mrs. L. Lord, Gordon Lewis and George Morel among others. Mr. J. Douglas was second. There were three competitors.

For twelve Carnations, selfs, Mr. Charles Blick, Hayes, Kent, was first, having Daffodil, Rosy Morn, Mimosa, The Chartist, Blondel, Bookham White, Fujiyama (red), Ashantee (crimson) and Mrs. Eric Hambro (white). Mr. James Douglas was second also in this class, his best flowers being Daffodil and Mrs. G. Marshall (crimson). Only two stands were set up.

For a stand of twelve Carnation blooms on cards, fancies, dissimilar varieties, there were three competitors, Mr. J. Douglas being placed first. In our opinion the stand of these from Mr. C. Blick, Hayes, Kent, who was placed second, contained a much weightier lot of blooms. Mr. Blick's Skirmisher was a grand flower. The same variety in Mr. Douglas' lot was in a state of collapse at 11 a.m. The latter's best flowers were Lord Steyne, Edenside and Linkman. Mr. Blick staged excellent Linkman, Forester, Donald McDonald and Mrs. Leo Hunter.

For a stand of twelve Picotees there were three competitors. Mr. H. R. Taylor, Cheam, was first; second, Mr. Douglas; third, Mr. Blick.

For twelve yellow-ground Picotees on cards, Mr. Douglas had the best lot, Mr. Taylor and Mr. Blick occupying second and third places respectively.

For four varieties of Carnations, selfs, three blooms of each, in vases, there were four entrants, Mr. J. Douglas occupying the first place with Basuto (crimson), Daffodil (yellow), Bookham White, and Cardinal (scarlet). Mr. H. Lakeman was second with good Bookham White and Daffodil. Mr. C. Blick was third.

For four fancies, shown in the same way, Mr. Douglas was again first, having Pasquin, Lord Steyne, Linkman and A. B. Stewart. Mr. Lakeman was second with a capital lot of flowers, having Father O'Flynn, Pasquin, Linkman and Lord Steyn. Mr. C. Blick was third with Cyclops, Skirmisher, Meduse and Linkman.

For four white-ground fancies, in vases, Mr. Douglas was first with a good lot, of which Henry Brett, Minnie, Mrs. P. D. Owen and Othello were prominent. Mr. C. Blick, who was second, had Herbert Newman, The Nizam, The Bride and Lass of Gowrie.

In the yellow-ground Picotee class, four varieties, three blooms of each, in vases, Mr. J. Douglas was again in the leading place.

For nine distinct varieties, selfs, fancies and yellow-ground Picotees, three blooms of each, Mr. J. Douglas was in the first place with a moderately strong lot, his best being Czar, Bookham White, Pasquin, Edenside and Elizabeth Shiffner. Mr. C. Blick was second with excellent examples of Daffodil, Forester and Linkman.

In the white-flowered class, one variety only, Mr. W. H. Paton, Moseley, was first with Bookham White.

In the dark red or maroon selfs Miss Shiffner was first with Mrs. G. Marshall (crimson).

In that for yellow selfs, three blooms, one variety, Mr. R. Morton, Woodside Park, was first with excellent Daffodil, this variety being favoured by seven out of nine competitors.

In the scarlet self class Mr. G. D. Ford was first in a collection of six with Fujiyama.

For three terra-cotta selfs, three out of four exhibitors had Elizabeth Shiffner, Miss Shiffner, Lewes, being first.

For six distinct varieties, selfs, fancies and yellow-ground Picotees, Mr. W. H. Paton, Moseley, was a good first, having Lord Steyne, John Knox (maroon), Margaret Lennox, Edenside, Rosy Morn and John Ruskin. There were four competitors, Mr. J. Fairlie, Acton, W., coming second with a nice lot of flowers.

For nine blooms, buff or terra-cotta selfs, one variety only, Miss Shiffner was first with Elizabeth Shiffner; three of four exhibitors showing this excellent variety.

Mr. J. Douglas was the only exhibitor in the class for other selfs, showing Purple Emperor and taking first prize. This exhibitor was also in the premier position in the classes for nine white, crimson, yellow and scarlet selfs, having Bookham White, Mrs. G. Marshall, Daffodil and Fujiyama respectively.

Good non-competitive exhibits of Carnations were staged by Mr. Douglas, Mr. St. John, Mr. D. B. Payne, Mr. Lakeman, Thornton Heath; and Messrs. Phillips and Taylor, Bracknell.

ROYAL HORTICULTURAL SOCIETY.

HERBACEOUS flowers were admirably shown at the fortnightly meeting of the above society on July 14. Phloxes and Gladioli were conspicuous among hardy flowers, while Roses, Sweet Peas and border Carnations were alike well represented. Some excellent fruit, both indoor and from the open, was also on view; but the show was not well attended, which, however, is not unusual during the month of July.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. J. Willard, A. Grubb, A. Bullock, G. Kelf, W. Pope, H. J. Wright, O. Thomas, C. G. A. Nix and J. Davis.

A collection of bush and pot fruit shown by Maldwin Drummond, Esq., Cadland Park, Southampton (gardener, Mr. L. Smith), calls for special mention. In addition to Apples, Pears and Plums on well-cropped trees, there were a great many dishes of Strawberries, Currants (red, black and white), Raspberries, Cherries, Peaches, Melons, Figs, Nectarines and Gooseberries; while the Grapes Cannon Hall Muscat and Black Hamburgh were also shown. Silver-gilt Banksian medal.

A collection of twelve dishes of hardy fruits was shown by Eric Hambro, Esq., Pickhurst Mead, Hayes, Kent (gardener, Mr. Claud Davis). The best dishes included Currants Black Champion, White Dutch and Red Dutch, Strawberries Laxton's Latest of All and Eleanor, Gooseberries Speedwell and Gage Berry, and Plum Golden Drop. Bronze Knightian medal.

Apricots formed the chief feature of a collection of fruits in pots shown by Messrs. William Paul and Son, Limited, Waltham Cross. Of the Apricots shown we noticed the varieties Moor Park, Hemskirk, Peach, Domayan and Blenheim. Moor Park is probably the best of all, and it is interesting to note that it has been in cultivation for centuries. Silver Knightian medal.

THE GARDEN.

No. 2228.—Vol. LXXVIII.

AUGUST 1, 1914.

NOTES OF THE WEEK.

Our Garden Planning Competition.—We would remind all those who are entering our competition for planning and planting the little garden that completed designs must be sent in not later than September 1. All competitors should carefully read the rules published in our issue dated May 16, and also the replies to queries in our issue for June 20. The rules can be had by sending 1½d. in stamps to the Editor. All envelopes containing letters relating to the competition should be plainly marked "Planning Competition."

Rose Gustave Regis.—For growing as a large bush or rather low pillar there are few better Roses than this Hybrid Tea. It has a vigorous habit, and flowers freely when once established. The bush shown in the illustration is over five feet high, and has been in its present position three summers. The long, beautifully shaped buds are nankeen yellow in colour, this fading to cream as the blooms expand, when they are only semi-double. It is a splendid garden Rose, and one of the best varieties for button-holes. It was raised by M. Pernet-Ducher, and put into commerce in 1890.

A Raspberry Fraud.—During the last few weeks Loganberries have been freely sold in many fruiterers' shops for Raspberries. Although the Loganberry is a good and useful fruit, it is much inferior to the Raspberry, and as the same prices are being charged, the substitution can only be characterised as a fraud. Fortunately, it is not difficult to tell one fruit from the other. In the Loganberry there is a hard central core, which cannot be removed when the fruit is gathered; but in the Raspberry the fruit, unless gathered for dessert or exhibition, is pulled away from the core, and is therefore hollow. The Loganberry is also usually considerably larger than the Raspberry, and those who desire and pay for the latter should be fully on their guard.

A Pretty Floral Combination.—We were attracted the other day by a group of the beautiful scarlet dwarf Delphinium nudicaule growing in the rockery, among which had been planted the white Butterfly Viola (*Viola Papilio alba*)

raised from seed sown in the spring. Perhaps some may think it was rather too formal for the rock garden, but no one could deny how effective the combination looked. Both are readily raised from seeds and are also suitable for the border.

A Good Autumn Rock Garden Plant.—One of the most suitable subjects for autumn

soon makes good plants; or it may be readily increased from cuttings or by division.

Shirley Poppies with Blue Tints.—Through the courtesy of Messrs. James Carter and Co., who sent out the seeds last spring with the reservation that they did not accept any responsibility for the raiser's description, we have been growing some of Mr. Luther Burbank's "blue" Shirley

Poppies. Although the colour of these is far removed from that of the Gentian or the clouds of a summer sky, there is undoubtedly some suggestion of blue. The best we have had has been a sort of smoke blue colour, which is not particularly pleasing.

Public Rose Gardens in America.—Public Rose gardens, we learn from the *Florists' Exchange*, are being planned and planted in many places in the United States of America, and our contemporary puts forward a plea on behalf of the Roses for generous treatment. At Elizabeth Park, Hartford, Connecticut, where the first of the public Rose gardens was formed in that country, they have an excellent plan for determining the value of new varieties. Before a novelty is planted in quantity in the Rose garden proper it has to undergo a test in a garden specially reserved for the purpose. We hope the day is not far distant when novelties in this country will have to undergo some test of their capabilities before receiving awards from the National Rose Society.

The Wig or Smoke Tree.—At the present time, and for some weeks to come, one of the most striking of hardy shrubs in gardens will be *Rhus Cotinus*, the Venetian Sumach, or the Wig or Smoke Tree, so called on account of its feathery filaments. These small, thread-like filaments are really flower-stalks, a good proportion of which, however, have never borne a flower, but are clothed with numerous silky hairs that give the entire panicle the curious fluffy appearance

that is so characteristic. The shrub attains a height of from 6 feet to 8 feet, with a sturdy habit. It is a native of Southern Europe and the Orient, whence it was no doubt introduced into this country about two hundred and sixty years ago. In the autumn the foliage changes to quite a brilliant colour.



ROSE GUSTAVE REGIS AS A LARGE BUSH THIS VARIETY HAS LONG, POINTED, NANKEEN YELLOW BUDS AND IS IDEAL FOR BUTTON-HOLES.

effect is *Silene Schafta*, a little alpine plant that might be grown in almost any garden where such flowers are prized, yet is so often absent. Trailing over rocks or growing in crevices, it is remarkably pretty with its bright pink flowers (which are borne in great numbers) from the end of July and onwards. It is easily raised from seeds, and

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

White Rose Ointment Pot.—I now have pleasure in sending a photograph of the ointment pot referred to on page 374 of last week's issue. It is placed on the trivet or "treft," resting on the logs placed on the "dogs" or "brand irons" as in actual use in olden times, and still occasionally found in remote farmhouses.—ANNE AMATEUR.

Mowing Lawns Without a Grass-box.—Re "Note of the Week" for July 11. This is an operation that should be done with discretion. On lawns that are chiefly grass there is much to be said in favour of it, but how often we see lawns that are nearly all weeds, chiefly the common Daisy. To mow such lawns without a box would be a great mistake, for although the Daisies may be in flower at the time of cutting, many of them have sufficient nutriment left in them to ripen seeds as they lie on the ground, and would thereby make a weedy lawn much worse.—F. G. P.

Dianthus Atkinsonii.—In your issue of July 11, page 353, Mr. S. Arnott, in his notes on *Dianthus*, speaks of *D. Atkinsonii* as a double rose pink. Surely what is generally known as *D. Atkinsonii* has single flowers of a vivid crimson-scarlet, one of the most gorgeous of coloured flowers. It is quite one of the best, and so free that it will often flower itself to death. It is a good plan to prevent one or two plants from flowering, although, if cut down as soon as the blooms are over, enough good growths are generally produced.—F. G. PRESTON, *Botanic Garden, Cambridge*.

Erigeron Edina.—In your report of the Holland House Show you refer in appreciative terms to *Erigeron Edina* as exhibited by Messrs. Bunyard of Maidstone. I am sending you an illustration of a plant to show you what this *Erigeron* is capable of in the way of display. There are probably only two forms of white-flowered *Erigeron* grown in gardens, namely, *E. Coulteri*, a quick-spreading but sparsely flowered species, and *E. neo-mexicana*, a plant of little garden merit. The newer *E. Edina* is a trim-growing dwarf form, flowering over a long period with extraordinary freedom. It originated five years ago at Hopetoun Gardens, and was first offered to the public by Messrs. Cunningham and Fraser, Comely Bank Nurseries, Edinburgh.—T. HAY, *Greenwich Park*. [The photograph sent represented a very good plant, but, unfortunately, was not suitable for reproduction.—ED.]

An Effective Flower-Bed.—Among the flower-beds in Finsbury Park—which just now are in fine condition—are some filled with a combination of dwarf *Heliotropes* and scarlet *Salvias*, with standard *Heliotropes* at intervals at the sides and along the centre. The vivid scarlet of the free-flowering *Salvias* contrasts admirably with the colour of the *Heliotropes*, and the delightful fragrance of the latter completes the charm of what, to my mind, is the most effective of the

whole planting scheme this season, albeit there are excellent beds of *Fuchsias* and also of *Begonias* and scarlet Zonal *Pelargoniums*, with such things as standard silver-leaved *Veronicas*, grey-leaved *Eucalyptus*, pink and rose *Clarkias* and *Grevilleas* to stand above the dwarfer subjects. It will be worth while keeping a note of the idea of using *Salvias* and *Heliotropes* in combination for another season, for a bed in the centre of a grass plot thus planted will produce a fine effect for a long period, and is a break-away from the orthodox Zonal *Pelargoniums* and *Calceolarias*.—HEATHER BELL.

Two Beautiful Violets.—I have never met anyone yet who did not like Violets. There are not many persons conversant with these modest but delightful flowers who do not know the varieties *Princess of Wales*, single, and *Marie Louise*, double. There are, however, two more sorts that should be added to every collection, namely, *Colcroonan*, double, resembling *Princess of Wales* in colour; and *Mrs. J. J. Kettle*, double, light mauve, with a distinct light centre. Both kinds of blooms



AN ANCIENT POT USED FOR MAKING ROSE OINTMENT.

are freely borne on strong stems, those of *Colcroonan* being very long.—AVON.

Lightness in Table Decorations.—Under this heading your correspondent H. A. Elliott raises, in issue No. 2226 of *THE GARDEN*, page 363, an interesting point worthy of consideration. In reference to the "Hints to Exhibitors" mentioned as being printed in the schedule of a well-known Yorkshire horticultural society, I would, at the outset, like to ask whether it is known that that particular society specially favours *Roses* at its shows? Because, if so, that fact would probably account for the bias in the direction shown in the "Hints." The reason for this question is because I happen to have been a member of a large Southern society in which this favouritism has been a conspicuous feature for some years, culminating during the current season in "*Roses only*" being stipulated as admissible in the class under notice. Otherwise, with the knowledge at our disposal, it is difficult to understand how a horticultural committee—the members of which are usually chosen for

the amount of experience possessed in exhibition matters generally—could allow the suggestions quoted to be printed in their schedule, the spirit of which, I venture to think, would be calculated, to say the least, to be misleading, especially to beginners. The majority of your readers will, I feel sure, agree with your correspondent that the value of a decorated table lies in the grace and charm created by its light effect as a whole, so that those around the board may "see through" without difficulty. In regard to the question raised as to the suitability of *Sweet Peas* and *Gypsophila elegans*, perhaps I may be permitted to mention the fact that I have myself, with good *Sweet Pea* blooms, *Gypsophila*—using, however, the double form of *paniculata*, which gives better effect—and other light foliage, been placed in front of competitors employing flowers of a less light character and probably costing considerably more. Not only the blooms, but the stems also of *Sweet Peas* possess the essential quality of lightness. A desirable *Sweet Pea* in

this connection is *Mrs. Townsend*, the colour of which—white and violet—is equally good on the reverse side of the flower. Respecting the use of *Sweet Peas* for table decoration, there is one reservation I would make, which is that unless really first-class blooms are available, it is better to use a subject such as *Carnation May Day* or *Enchantress*, still, however, using the lightest of foliage, together with the *Gypsophila* particularised.—B. W. LEWIS.

An Unusual Rose Stock.—Thinking it may prove of interest to readers of *THE GARDEN*, and especially to *Rose* enthusiasts, I send a brief account of my discovery of an unusual stock having been used for grafting a *Rose* upon. I judge the stock to be a variety of *Cotoneaster*, but enclose a slip so that you may verify the same by a brief footnote. The shrub is now 3 feet or so in height, rather more across, and of a spreading habit. It is about four or five years ago since it first made its appearance above ground

directly in front of a *William Allen Richardson Rose*, say, 15 inches from the chief stem. When first seen we had no idea of what it might be, and as there was no other plant just near, it was allowed to grow. Imagine my surprise when working around the *Rose* and shrub to find the latter growing off a large root which I traced back to the original rootstock of the *Rose William Allen Richardson*. Presumably such an experiment was the work of some nursery employé, and it has certainly answered quite well, for I understand the said *Rose* has been where it now is eleven or twelve years. Of course, the first growths of the *Cotoneaster* were made at the expense of the *Rose*, the vigour of which was much impaired owing to our not being aware of the connection between the two. The flowers of the shrub are quite insignificant, and are just over, but the crimson berries which follow are rather attractive in the autumn and early winter. Has such a case been recorded before?—C. TURNER, *Ken View Garden, Highgate*. [The *Cotoneaster* sent was *C. Simonsii*.—ED.]

New White Climbing Roses.—If Mr. H. E. Molyneux will grow Mrs. M. H. Walsh (Walsh, 1913), he will not be compelled to say "We still want a good white." The new-comer is absolutely white, with rosette-like blooms, freely produced. Its dark, shining foliage, like the bulk of the wichuraianas, makes a good contrast to the pure white flowers. In growth it is all that can be desired, and especially free flowering. Again, if Mr. Molyneux will grow Mrs. Littleton Dewhurst, which is another sport from Dorothy Perkins and pure in colour, much superior to White Dorothy, which is especially inclined to sportiveness this season, he will even then not have to make this complaint.—E. M.

A Good Yellow Gladiolus.—In your issue of April 25 (page 204) a correspondent deals with the newer kinds of yellow Gladioli, but fails to mention Schwaben, a variety raised by Pfister of Stuttgart, and which in Australia surpasses Glory of Noordwijk, which is recommended in the article referred to. Schwaben has been exhibited here with twelve flowers in perfect order at once. The flowers are large and of a fine yellow, and the growth vigorous to a quite unusual degree. This variety was awarded a championship at Moe here on April 17 last. Glory of Noordwijk also has been shown, but has attracted attention only by means of its high price. Golden Empress, a variety raised in Tasmania, is considered by some growers to be equal to Glory of Noordwijk, but Schwaben is always considered superior, though its colouring could be purer. Niagara varies terribly in its coloration, coming almost pink in some soils. Its facing leaves much to be desired also, but it throws a very fair spike.—GILBERT ERREY, Victoria, Australia.

The Most Fragrant Rose.—I spent much time round the new class for fragrance at the Holland House Show, and am not at all surprised to read the remarks of "Old Rose" as to the strength and kind of fragrance contained in the winning blooms of Queen of Fragrance, the variety favoured by the judges and the winner of the "Clay" Cup. To me many of the remarks made by passers-by savoured of the unjust, because they appeared to be quite ignorant of the conditions required and judged the Roses staged by appearance, often ignoring entirely the fragrance altogether. One "expert" put his nose within an inch or so of the flowers and compared the fragrance to some Apples. I rejoined, "More like sour Grapes to you." I know dozens of people condemned the award entirely in ignorance, and I shall not be surprised if we have to read remarks in the Press made by such. While agreeing that Mrs. G. Norwood is a delightful Rose in many ways, and pleasingly sweet too, it must be admitted that the blooms in question were not equal to those selected, as they suffered somewhat from age. I do not mean they were not fresh, but not equal in any way to what this variety was shown much earlier in the season. I think it must be admitted that even the fragrance of a Rose wanes as the blooms become smaller in their season. I tested all the blooms staged most carefully many times after the judges had pronounced their award, and I am firmly convinced that they spared no pains to arrive at a correct decision. I watched them closely all the time they were engaged. Of course, I shall be told this is only a matter of opinion. That may be so, but I want readers to understand that the award was not made in a perfunctory manner by the lady and gentleman appointed.

I am thoroughly convinced no injustice was done to other exhibitors.—EDWIN MOLYNEUX.

Naming of Daffodils.—I have always rather prided myself on taking some pains and care in giving appropriate names to my Daffodil seedlings, so that the criticisms of your Colonial correspondent "A. E. G.," page 362, issue July 18, touch me in a very tender spot. He finds some fault with the naming of Swashbuckler, a flower which, I gather, he has never seen. I am sure that were he to see it, he would at once grasp the appropriateness of the name. Its section is, I should say, on the border line between a Giant Leedsii and a Giant incomparabilis; but it is a great, bold, aggressive-looking flower, with enormous substance both in flower and stem, so much so that when I exhibited it in London a gentleman to whom I was showing it asked me as a favour not to hit him with it! I have no interest in it now, as the stock has passed into the hands of my friends Messrs. Cartwright and Goodwin; but I remember that Mr. Goodwin, when making the purchase, remarked on the particular appropriateness of the name, and I cannot help wishing that "A. E. G." had also had a view of it; in which case I am sure that he would not have included it in his list of undesirable or inappropriate names.—F. HERBERT CHAPMAN.

The Leaf-cutting Bee among Pelargoniums.—Looking over some scarlet Zonals recently, I was surprised to find on many of the flower-trusses that small portions of the petals had been removed by clean, regular, crescent-shaped cuts. I guessed this must be the work of the leaf-cutting bee, although I had never before known this clever and industrious—though destructive—insect to choose the flowers of Pelargoniums for its labours, the usual thing being for it to attack the foliage of Rose bushes. However, I bade my little son keep watch upon the plants, and, sure enough, before long the bee appeared, alighted on a petal, cut out a piece and flew off with it. Having learned that this was the case, I took up the observation myself, and found that, at regular intervals of five minutes, the bee returned to my plants. This showed me that its nest must be a considerable distance off; but by the aid of binoculars I was enabled to watch the bee to ascertain the direction of its flight. Within three days I had traced its home and destroyed it; but not before some hundreds of pieces had been deftly removed from the flowers of my Zonals. Strange to say, although I had Paul Crampel, Jacoby and the Ivy-leaved Mme. Crousse growing side by side with Vesuvius and Raspail, only the last two varieties were attacked, from which I gather that whatever colour is first chosen is adhered to during the whole operation of nest-building. If any readers notice a number of crescent-shaped cuts on their flowers or on their Rose leaves, it will be as well to watch for the leaf-cutting bee, for if unchecked this busy little insect will work extraordinary mischief among the plants.—HEATHER BELL.

FORTHCOMING EVENTS.

August 3.—Flower Show at Carshalton.

August 4.—Flower Show at Abbey Park, Leicester (two days). Scottish Horticultural Association's Meeting.

August 7.—Perthshire Sweet Pea and Rose Show (two days). Dundee Horticultural Association's Meeting.

August 8.—Stirling Horticultural Association's Outing to Callender Park, Falkirk.

THE LILY SEASON IN SCOTLAND.

ORIENTAL and American Lilies in South-Western Scotland have been materially stimulated in their growth and flowering potentialities by the advent of the recent rains. Previously it appeared as if they were making but little progress in the direction of floral evolution. Perhaps the one outstanding exception was the fair Madonna Lily, *Lilium candidum*, which seems less susceptible than many other Lilies of less attractiveness to atmospheric influences. This is still one of the most beautiful of all Lilies, for its flowers are invariably richly ornamental and refined in their fragrance.

L. longiflorum is also for the most part comparatively easy of culture when it is assigned a sunny, sheltered situation and a moderately fertile soil; but only too often it reduces to a minimum its splendid possibilities by the creation of a large number of impotent miniature bulbs. On the other hand, the great Himalayan Lily, *L. giganteum*, which grows grandly at Monreith and Lochinch Castle, though it usually generates several offsets of a considerable size, seldom suffers so perceptibly from this special cause. But then it must be remembered that its offspring sometimes take from four to five years to reach their full dimensions, while those of *L. longiflorum* develop very rapidly. This is especially characteristic of the fine variety entitled *L. Harrissii* when cultivated in a warm conservatory.

In my own garden the first Oriental Lily to flower adequately this season was *L. Hansonii*, the luminous Yellow Martagon, which invariably produces an artistic effect. This variety was quickly followed by *L. szovitzianum*, which this year approximated to a height of 8 feet. Its citron-coloured, pendent flowers are exceedingly graceful. One of the loveliest contemporaries of the Persian Lily in this sequestered region of Scotland is *L. washingtonianum*, a native of California, which, with its charming aspect and delicately Woodbine-like aroma, may be described, without exaggeration, as a veritable gem. Next in order of flowering here come the Siberian *davuricum* (varieties *erectum* and *incomparabile*) and the even more richly coloured Californian Panther Lily, *L. pardalinum*, of which one of the finest and most reliable varieties is *Burbankii*.

L. Henryi, a distinctive Lily from Western China, with a uniquely pendulous characteristic, is at present developing with a gratifying vigorousness; so also are *L. auratum platyphyllum* and *L. virginale*; while the noblest forms of *L. speciosum*, and especially *L. s. Kratzeri* and *L. s. magnificum*, promise to be splendidly impressive this year. DAVID R. WILLIAMSON.

Manse of Kirkmaiden, Wigtownshire, Scotland.

TWO LITTLE KNOWN ANNUALS.

THERE are a number of beautiful annuals that are ideal subjects for the rock garden, among which may be mentioned *Downingia pulchella* and *Eucharidium Brewerii*, the former with large Lobelia-like flowers of rich blue with yellowish eye, and the latter with beautiful pink flowers, which, from an outward appearance, one might compare with the beautiful *Shortia uniflora*, although it is in no way related. Both are natives of California, and are among the gayest of annuals at the present time.

HARDY AMERICAN PRIMULAS.

PROFESSOR BAYLEY BALFOUR classes the nineteen named American Primulas into three sections—*Farinosa*, *Cuneifolia*, and *Nivalis*, though he does not consider this grouping final. It will thus be observed that this area, so rich in other hardy plants, gives us a small number of Primulas. Some of them are of special interest, and the greater number are worthy of more extended cultivation. Of those I mention, all are hardy with the exception of *P. Rusbyi*, which is so nearly hardy with me that I think it desirable to class it with the other hardy American species I have cultivated.

***Primula americana* (Rydberg).**—*P. americana* of Rydberg is admittedly a microform of the widespread *P. farinosa*, and it is classed by some botanists as *P. farinosa* variety *genuina*. It has the leaves farinose beneath, obovate-oblong, obtuse and crenulate or denticulate. It is a native of the Rocky Mountains, and occurs in Alberta, Colorado and Montana. It can be cultivated under the same conditions as other forms of *P. farinosa*, and is an attractive little Primula.

***P. davurica* (Spreng.).**—Pax does not admit this to specific rank, and makes it a sub-species of

***P. farinosa*.**—This is mentioned in my account of the Asiatic, but not Chinese or Japanese Primulas, page 180, April 11 issue, and need not be further discussed at present, except to state that it has been found in Saskatchewan.

***P. eximia* (Greene).**—This member of the *Nivalis* section is spoken of among the Japanese species, page 280, May 30 issue, and reference may be made to that article for further information. It will suffice here to say that it is found in the Aleutian and Pribilof Islands.

***P. groenlandica* (Warming).**—This is another of the microforms of *P. farinosa* which are denied specific rank by Pax. It is a native of Greenland and Labrador, and is *P. stricta* of Lange. The leaves are large for the size of the plant, and are more or less farinose beneath, deeply denticulated or nearly entire, the base narrowing into a short petiole. The scape is stout, and rises above the leaves. The flowers are violet. Cultivation: Same as *P. farinosa*.

***P. magellanica* (Lehmann).**—In this we have another of the *Farinosa* section which is classed by Pax as a variety. For garden purposes it may be called a form of the Bird's-eye Primroses. It is a robust form, with rhomboid-elliptic, crenate-denticulate leaves, the sturdy scape rising above these. The flesh-coloured or white flowers are almost capitate or on short pedicels. The habitat of this Primula is one of the most curious in phytogeography. How this Northern species has contrived to jump over the whole American Continent, to pass the Equator, and to establish itself in the extreme South, is a mystery as yet unexplained by science. It is found in Fuegia and Chile, and is plentiful in the Falkland Islands, where, on a few of the islands where there are no sheep, the hillsides are covered with its white

or lavender-coloured flowers, and these grow to 1½ feet to 2 feet high. In former years it reached that height in all the islands, but the species has dwindled in size since the introduction of the sheep. It is a good garden plant.

***P. mistassinica* (Michx.).**—Another form of *P. farinosa*, *P. mistassinica*, which is *P. pusilla* (Goldie), *P. tenuis* (Small) and *P. Macalliana* (Wiegand), is a considerably smaller plant, and only grows from 1 inch to 6 inches high. It has spatulate or obovate leaves, which are generally green on both sides, but are occasionally sparsely farinose beneath, and denticulated or repand, obtuse at the apex, and narrowed or cuneate at the base. The flowers are from two to six in the umbel, and are pink or pale purple, with or without a yellow eye. The corolla lobes are obcordate. It is a native of wet banks, and extends generally from Newfoundland to the Rocky Mountains. It is also found in Northern Europe.

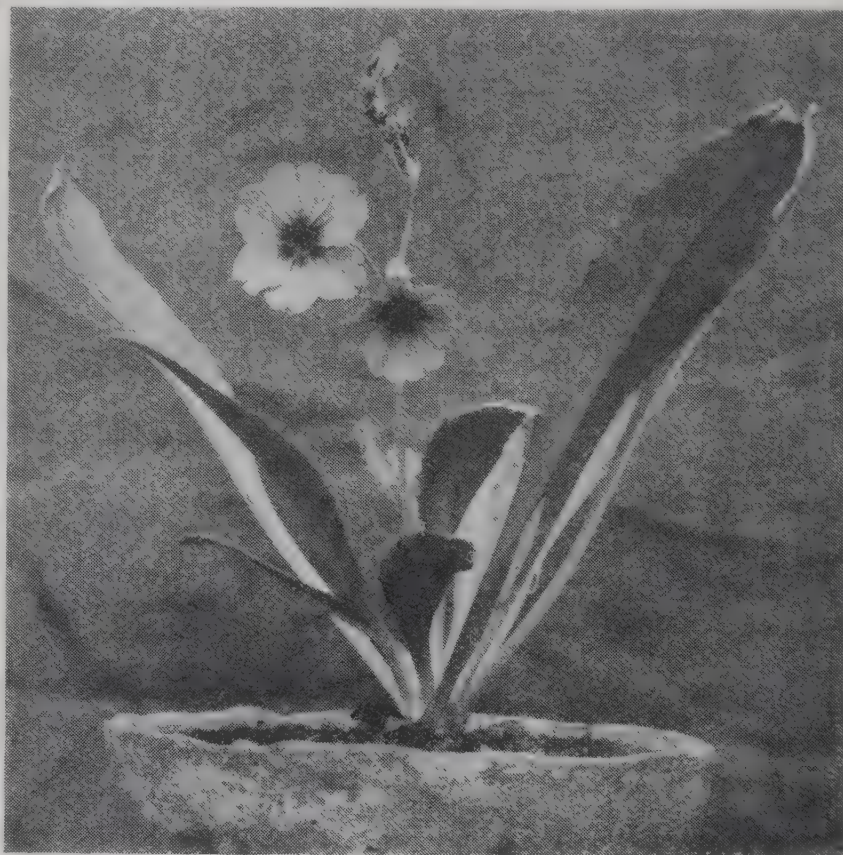
***P. Parryi* (A. Gray).**—This native of the sides of the alpine brooks of North America comes from

out by the general experience. It is a very distinct species of the *Cuneifolia* section, and came from the Rockies of Arizona and New Mexico in 1885. The leaves are sometimes as much as 4 inches in length and rather more than half that in width. The flower-scape rises a little above the leaves and bears an umbel of from two to ten peculiarly scented flowers of a crimson-purple colour, nodding to one side, with a deep irregular ring round the yellow throat of the corolla. The calyx is prettily striped with white meal. I cannot grow it in the open, but it succeeds moderately well in a cold house with the pots plunged in and covered over with ashes during the winter season. It blooms with me, although late, but does not seed.

***P. integrifolia* (Gumer ex Oeder).**—It will, perhaps, be better to speak of this plant as a form of *P. sibirica*, of which it is a microform. As I shall refer to *P. sibirica* in connection with the Himalayan species, it is needless to deal with it in detail now. It is, of course, quite distinct from the European *P. integrifolia*, L.

***P. suffrutescens* (A. Gray).**—This sub-shrubby species, introduced in 1884 from Sierra Nevada, proves fairly hardy with me in a sheltered, well-drained spot in the rockery, but I find it does better when grown as a pot plant in a cold house. It has much the appearance of a dwarf shrub with its branches lying along the ground. The pretty pink flowers are borne well above the leaves on erect stems. Partly owing to the fact of the branches resting on the ground, they are apt to rot off during the winter months. This species, like others, is best raised from seed, but can also be increased by layering and from cuttings. Cultivation: Light, well-drained soil, with a fair amount of sun.

***P. Warei* (Stein) = *P. americana* (Rydberg).** JOHN MACWATT.
Morelands, Duns.



PRIMULA RUSBYI, A LITTLE-KNOWN SPECIES WITH CRIMSON PURPLE FLOWERS.

near the snowline of the Rocky Mountains, from Colorado, through Nevada and Arizona. It was introduced in 1875, and figured in the *Botanical Magazine* of the same year. In that publication it was said to be the handsomest Primula in cultivation with the exception of *P. japonica*. Having grown this Primula in quantity, I cannot share or support this opinion. All the same, it cannot be denied that it is a good plant, although difficult to cultivate in most places. I have no difficulty with it planted deeply in good soil in a Rose bed. It has bright purple flowers, about an inch across, with long scapes bearing frequently a dozen blooms in an umbel. The leaves are sessile or narrowed into a broad petiole, erect, obtuse or sub-acute, and obscurely toothed or entire. It is from 6 inches to 18 inches high. Cultivation: Good rich, well-drained soil in half shade facing west.

***P. Rusbyi* (Greene).**—Unfortunately, I cannot say that *P. Rusbyi* is hardy and easy to grow—at least, it is not so with me, and this is borne

and are excellent flowers for the border, the wild garden, or the open parts of the woodlands, where, when plentiful enough to mass in broad array, they would make a much finer effect than if planted dotted here and there in the woodlands.

They are, however, choice enough and good enough for planting in the flower border. The Gillenias are close allies of the Spiræas, but do not produce their flowers in the large panicles generally borne by these valued plants. The flowers are white or pinkish, but few are quite devoid of the tinge of pink, which lends a little additional brightness to the flower.

As will be understood from the introductory remarks, these Gillenias present few obstacles to the cultivator, but they dislike a poor and dry soil. A moist situation is preferred, and this can be afforded in most gardens. They rather like some shade, so that they are valuable for shady places—no slight recommendation in many gardens. There are two species of Gillenia, the first, *G.*

GILLENIAS AND THEIR CULTIVATION.

THE Gillenias are graceful subjects, known to some American botanists as the *Porteranthus*, in lieu of the more acceptable name of Gillenia, to which we are most accustomed. They are elegant, Spiræa-like plants of much beauty, although not of a showy nature,

trifoliata, the Indian's Physic or Bowman's Root of its native land, the Northern United States of America. It grows from 2 feet to 4 feet high, and is the finer of the two species. It has narrower stipules than the succeeding one, and is glabrous and not pubescent, as is the latter. The other, *G. stipulacea*, the American *Ipecacuanha*, is much the same in general appearance, but is inferior as a garden plant because of the fact that it has fewer and smaller flowers. The *Gillénias* are increased by division in spring or autumn, and can also be raised from seeds.

S. ARNOTT.

HYACINTHS, NARCISSI, AND TULIPS FOR FORCING.

THE time has again come round when the preparation of forcing bulbs must be concluded; for, be it said, preparatory proceedings have been going on for a long time. Narcissi lifted some weeks since for pot culture were planted two and three years ago, and only the best of these have been selected, the inferior ones being replanted for outdoor flowering and for the production of forcing material in the future. Commonly called Dutch bulbs, as is well known, undergo similar preparatory culture, extending over years, the cheaper qualities being immature and, consequently, incapable of producing the best flowers. I have nothing to say against "cheap" bulbs, and there is no good reason why they should not be a marketable commodity, only it should be understood that a Daffodil, for instance, that has been grown from an offset one year, and then may or may not yield one bloom of inferior quality, cannot compete with a three year old bulb giving its two or three superior blooms, and for which an enhanced price is charged, though it is fair to say only slightly enhanced in comparison to the superior results.

In Tulips the blooms are larger, and in general better coloured in high-class bulbs than in immature ones; and in Hyacinths the spike is quite another thing from the feeble production of the third-rate quality. The same occurs in Lily of the Valley, Crocuses, *Spiræas* and other forcing material, and no cultivation, however proper, will have the slightest effect in improving the flowers beyond the limits prescribed by their previous treatment. In a bulb of mature age, furnished with the embryonic foliage and flowers of the succeeding season, cultivation brings out the highest quality it is possible to attain, and it is with these that failure, less or more obvious, occurs when the cultivation is indifferent.

The principle the bulb-grower has to go upon, therefore, is to endeavour by a treatment proper to the special plant to induce it to perfect the future flowers and foliage concealed within the bulb to the greatest possible limit. Everything that the future can bring forth is already there,

and cultivation is concerned solely in exhibiting its proportions in due season.

The Best-Sized Pots.—It is a very good old rule that the material for forcing early should be allotted to smaller pots than that not to be subjected to that treatment, which it will be seen resolves itself into a question of time to make the needed number of roots, and also to allow for shortening the time the requirements of the plant naturally demands. That this is by no means an unimportant part in early forcing is proved by Continental material, which comes to maturity annually in advance of that produced at home, forces more easily than the latter, and also from the fact that forced bulbs planted in the open retain for a time the earliness thus forced upon them. This rule applies more to Narcissi and Hyacinths than to Tulips, but in all it is worth keeping in mind. I use for Hyacinths 4-inch, and for Narcissi 5-inch, pots. For early forcing, Tulips do well enough in 5-inch and 6-inch ones.

compost, free for the roots to penetrate, does away to a large extent with the need of a cumbrous drainage system. Thus for Narcissi, which I grow in 5-inch to 9-inch pots, one piece of potsherd is as a rule all that is employed, with a layer of rough material laid upon it. Tulips need no more, but Hyacinths are less complacent, and for 6-inch pots small potsherds are necessary as well as large ones. It is clear that space unappropriated—shall I say misappropriated?—by drainage provides an additional space for soil, hence a larger root-run, and this may be further increased by keeping the bulb well up. Bulbs of Narcissi need very little of their bulk buried, Tulips rather more, and Hyacinths should not be much exposed.

As already hinted, Narcissi and Tulips should be potted with the bulbs almost touching, and it therefore depends on the dimensions of the bulbs individually how many shall be grown in each pot. The earliest Hyacinths, such as General Pélissier, do well one bulb in a 4-inch



PRIMULA SUFFRUTESCENS, A NATIVE OF SIERRA NEVADA. THE FLOWERS ARE PINK.

For Narcissi and Tulips I pack as many bulbs into a pot—of whatever dimensions—as it will hold. Provided the compost is suitable and plenty of roots as a result are produced, all that is necessary for the grower to see to is that the plants are well fed and never neglected.

The Soil.—It is a well-known fact that these plants can perform all the functions of leaf and flower production on water and on fibre; hence the grower who fails to provide a compost deficient in porosity—one in which leaf-mould, for instance, is largely proportioned, and sand, if required—is to that extent courting disaster. So also the compost should not be compressed to anything like the extent of ordinary greenhouse plants, and it is noteworthy that the very unsuspecting-like practice of pressing a Hyacinth or Tulip into the soil may result in its roots refusing to enter the soil at all, and to throw the bulb upwards, a derelict for the nonce. A nicely imagined

pot, and for 6-inch pots three in a pot is the number I use. Darwin Tulips require slightly more space than the early singles and doubles, and very glorious masses of the former are provided when 8-inch and 9-inch pots are used. In these large pots the bulbs may be arranged in two stages, one lower than the other, and by staking out the outermost plants large specimens suitable and, indeed, indispensable for decoration are secured. Space is exhausted, but I would like to add: Do not attempt to grow many varieties. To have very early flowers, rather confine yourself to one Tulip, Proserpine; one Hyacinth, General Pélissier; and one Daffodil, Golden Spur. Pot all the Narcissi at the earliest moment, the others when they come to hand, with relays in September and October; and in forcing proceed slowly till the flower spike or stem shows that it is pushing freely, darkness up to an advanced stage having a very favourable effect.

R. P. BROTHERSTON.

NOTES ON JAPANESE IRISES.

IN spite of continuous drought in our East Coast district, 1914 has otherwise been a good year for Japanese Irises, and a few notes concerning them may be welcome to many readers. The standard Japanese forms, including the lovely Deep Blue Waters, have been very fine, and several of these are worthy of mention. Among the more notable of the Japanese forms I will name Zama-no-mori, a beautiful, large, three-petalled form, pure white save for the yellow blotches and just

the lawn or grassland, so that it would be an easy matter to flood the Iris plants during dry weather. For manuring, nothing equals cow-manure.

Propagation is chiefly confined to division, and here let me advise the reader as to the time of operation. All division of the Japanese Irises is best effected directly after flowering. The clumps should be carefully lifted, and each strong growth severed separately with the roots attached. These should be potted up in enriched soil of which the body is good loam, using 4½-inch pots. After potting, place the plants on a good ash-bed in the open, and keep them watered as necessary with a rose-can, damping the foliage



JAPANESE IRISES EFFECTIVELY GROUPED BY THE WATERSIDE AT WISLEY.

a suggested suffusion of light blue. Kumo-no-obi, the lovely Band of Cloud of the Japanese, is a lavender purple, with the yellow blotches halved in white, a pretty three-petalled form. Very noteworthy is Shirataki, the White Waterfall, with its fine white petals of marvellous beauty. With its six massive petals Shirataki is one of the grandest Irises in existence. Kyodaisan is purple with blue and striking orange blotches, and is of high merit. This, again, is six-petalled. Choseiden is ruby crimson, a lovely big flower with a halo of white surrounding the yellow blotches. Kasugano, a red lilac variety, is a glorious flower, and worthy of attention. Then there are Oyodo, a large violet blue; Momiji-no-taki, crimson purple, suffused and feathered with white; Warai-hotei, a large lavender blue; Osho-kun, a brilliant Tyrian blue; Yedo-jiman, deep blue and purple; and several others equally noteworthy.

For the interest of readers I add a few cultural notes. The Irises are worthy of the utmost attention in the matter of sites for planting. The ideal position is one where they can grow with their heads in the sun and their toes in the water. A deep, loamy soil, plenty of moisture, and an open position with full exposure will be ideal. If one possesses a garden pool or a winding stream, it is an easy matter to make an Iris swamp or Iris garden. If no waterway is possible, the next best plan would be to make some sunken beds in

as well as the soil. In a short time the pots will be full of new roots. Then the new situations or beds can be prepared, working soot, cow-manure and perhaps a little bone-meal into the soil. Deep cultivation is a great asset toward ultimate success, and if the above system is followed, the young plants are established before the winter.

Now for just a few words in reference to our own hybrid seedlings of 1914. This year we have flowered many fine seedlings, of which the best have been marked for propagation. A few of the best are: Matsushima, a large six-petalled flower of a soft sky shade, overlaid with a suffusion of blue, and lines of blue which deepen to purple at the edges. The usual yellow blotches are very conspicuous, and the plant strong in growth. Kameido, a lovely ruby red of immense size, with a big halo of white around the golden blotches, is very striking.

Lady Marjorie is another large six-petalled form with a ground colour of white. The petals are delicately lined and suffused with blue and purple, and the usual characteristic yellow blotches are most effective. The Dove, a pure white, which will be quite worthy to rank with the standard whites Shirataki and Zama-no-mori, is six-petalled, but differs from most white Kämpferis by reason of its carrying three petals as standards. These three are pure white, but the fall petals have the yellow blotch.

Clacton-on-Sea.

P. S. HAYWARD.

COLOURED PLATE.

PLATE 1499.

DAFFODILS IN GRASS.

IT has never been my good fortune to see the Daffodils in the grass in bloom at Kew, but if anything would make me undertake a journey there next spring to have a look at them, it would be the coloured plate in this week's issue. They are arranged just as I would plant them myself, not in one huge homogeneous mass, whose only charm would be its size and solid magnificence, but in patches of irregular size and varying contour, some of which would contain only two or three bulbs, while the largest ones might be made up of two or three hundred. These groups I would place "anyhow" in the space to be allotted to them, taking care that there was always a sufficiency of unplanted grass between them. Kew fulfils my ideal in this respect also.

Thirdly, it will be noticed that all the flowers in the foreground of the picture are all of one kind, probably either Empress or Horsfieldii, and that it is not until the trunks of the large trees are almost reached that we have a change, when the white effect gives place to an expanse of yellow, it might be of Emperor or Sir Watkin, or even princeps. This is on quite the right lines. In striving to get the best effects in a garden, massing is always a very important factor, but never more so than in planting Daffodils in grass or in a woodland. Keeping the different kinds by themselves does more than anything to lend a charm to the scene; while, on the other hand, planting in dabs only gives us a sense of muddle.

These, then, are the three main principles which, I think, should guide all Daffodil planting in grass: (1) Plant in irregular masses of one variety; (2) leave grass spaces between the clumps; (3) keep the masses of the same variety more or less together. I do not think I am divulging any editorial secrets when I say that Kew and myself are supported by no less eminent an authority than Sir Frederick Moore of Dublin, who will have an article on "Daffodils in Grass" in the 1914 Royal Horticultural Society's "Daffodil Year Book," in which he records his practice and experience in the Botanic Gardens at Glasnevin, where, some five years ago, it was my privilege to see them in their full glory. "There can be no comparison as to the more pleasing effect of a bold expanse of one variety and of a mixture."

Proceeding from the general to the practical, I would say that nearly any variety may be used, and that the only consideration that need very much trouble the planter is the effect that he wants to produce—I mean, for example, if a succession of bloom is required, or if a gradation in shading is thought desirable. Catalogues must then be consulted where times of flowering and colour descriptions are given. Apart from all particular requirements, the following are among those I have found satisfactory: Lobularis, John Bull, Stella, Horsfieldii, Emperor, Citron, princeps, triandrus albus, Queen of Spain, Poeticus recurvus, Sir Watkin, Barrii conspicuus and Mrs. Langtry.



A SPRING SCENE AT NEW.

The best time to plant is in October, or even early November if the autumn has been a dry one. In any case a sufficiency of rain should have fallen to thoroughly moisten the ground. The work is then much more expeditious, and the bulbs commence to root "right away." I always use a Barr's Bulb Planter, and from my own experience it is what I would advise anyone to work with who is going in for grass planting on an extensive scale. Three men (or women, for women can do the work very well) are best for the job—one to make the holes, one to place a little good soil in the bottoms, and a third to put the bulb in and replace the round bit of turf.

In the clumps plenty of room should be left between the plants to allow for their natural increase. Six or even eight or nine inches is none too much to allow in the case of the larger and more robust varieties.

Lastly, even if it is like taking coals to Newcastle, I must insist upon the practice of leaving the foliage uncut until about the middle of June, when the foliage has gone yellow. One year's premature cutting off will only weaken, but a second will probably kill the bulbs, as I know the powers that be in a famous garden not long since found out to their cost.

JOSEPH JACOB.

THE GENUS COBÆA

AS long ago as 1880 I contributed an article on the genus *Cobæa* to THE GARDEN (Vol. XVII., page 352), embodying the species then known with their distribution, and other particulars and descriptions of two new species. Altogether eight species are there dealt with, including four that were, or had been, in cultivation. Two years later I had no additions to make to the genus in the Botany of Godman and Salvin's "Biologia Centrali-Americana." But a synopsis of the species by Mr. A. Brand in 1907 brings the number up to eleven, and in a revision by Mr. P. C. Standley in an American publication, received a short time ago, the total is increased to eighteen.

It may be useful to repeat some of the information I gave thirty-four years ago before giving the new. *Cobæa* belongs to the same family as *Phlox* and *Polemonium*, and it is singular in the family in habit, climbing by means of tendrils. The species are all American, ranging from North Mexico, through Central America, to Chili, Venezuela and North Brazil; but none has yet been discovered in the West Indies. They grow naturally in humid, subtropical forests, and some of them, like the familiar *C. scandens*, reach the tops of tall trees. *Cobæa* was founded on *C. scandens*, which has, it will be remembered, a campanulate corolla not unlike that of the Canterbury Bell. In 1856 Oersted described an allied plant under the name of *Rosenbergia gracilis*, though it had all the essential characters of a *Cobæa*, except the corolla. This is smaller and deeply divided into slender lobes, and of very different appearance.

Later explorations led to the discovery of species intermediate in the shape of the corolla; hence the species are all now placed under *Cobæa*. On the ground of invalidation, Mr. H. D. House transferred all the species of *Cobæa* to *Rosenbergia* in 1908, but this change has not been sustained. The species of *Cobæa* are:

C. penduliflora (Standley; Karsten).—"Flora Columbia," Plate 14, under the name of *Rosenbergia penduliflora*. Native of Venezuela, but no particulars of locality are on record. This is not the plant cultivated under the same name. See next species.

C. hookeriana (Standley).—The same as *C. penduliflora* (Hooker), *Botanical Magazine*, Plate 5757. Native of Venezuela. Raised at Kew from seeds received from Mr. A. Ernst, and flowered in the Palm House in December, 1868.

C. panamensis (Standley).—Native of the mountains of Chiriqui, Panama, at elevations of 4,000 feet to 5,650 feet. This differs from *C. hookeriana* in having a deep purple corolla with very narrow lobes and narrow calyx lobes.

C. aschersoniana (Brand).—Native of Costa Rica at elevations of 6,000 feet to 7,000 feet.

C. triflora (Donnell Smith).—Native of Guatemala at about 4,500 feet.

C. campanulata (Hemsley).—Native of Atacama, Chili.

C. minor (Martens and Galeotti).—Native of Mexico and Costa Rica, ascending to 10,000 feet.

C. Trianaei (Hemsley).—Native of Colombia; imperfectly known.

C. pachysepala (Standley).—Native of Guatemala at 9,000 feet to 10,000 feet.

C. tomentulosa (Standley).—Native of Guatemala at about 8,000 feet.

C. baurita (Standley).—Native of South Mexico at 4,000 feet to 5,500 feet.

C. Pringlei (Standley).—Native of North Mexico, in the Sierra Madre, near Monterey, Nuevo Leon. This locality is far north of that of any other species. The flowers are very similar in shape to those of *Campanula carpatica*.

C. stipularis (Benth).—*Botanical Register*, XXVII., Plate 25, 1841. Native of Mexico; introduced by Hartweg.

C. scandens (Cavanilles).—*Botanical Magazine*, Plate 851. Native of Mexico. I find no records



ANOTHER VIEW OF THE JAPANESE IRISES IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY.

Corolla intermediate between typical *Cobæa* and typical *Rosenbergia*.

C. gracilis (Hemsley).—The type of Oersted's genus *Rosenbergia*. Native of Costa Rica and Panama. Flowers small; colour not given.

C. viorna (Standley).—Native of Guatemala up to an altitude of 3,500 feet. Flowers greenish yellow, about one and a-half inches long.

C. villosa (Standley).—Native of San Salvador.

C. lutea (Don) = *C. macrostemma* (Pavon) — *Botanical Magazine*, Plate 3780. Native of Guatemala and Costa Rica. Raised at Kew from seeds sent from Guatemala

of altitude beyond "near the city of Mexico," which is situated above 7,000 feet. The date of the introduction of this species is usually given as 1792, the year the figure was published in the *Botanical Magazine*; but in the text it is stated that the drawing was prepared from a plant that flowered in Woodford's nursery in 1784.

For showiness of flowers none of the foregoing new species enumerated excels *C. hookeriana* (*C. penduliflora*) and *C. scandens*, but several of them surpass the cultivated species in grace and elegance.

W. BOTTING HEMSLEY, LL.D.
Strawberry Hill.

AUGUST NOTES ON VEGETABLES.

Peas.—Although it is now late to make sowings, should the weather be favourable during September and October the resultant crop would be found extremely useful. Varieties best suited for sowing now are The Gladstone, Ne Plus Ultra, Goldfinder, Late Queen and Latest of All. Make a good preparation before sowing the seed, dig deeply, and well soak the drills before sowing if the soil is at all dry. This will hasten germination and encourage the plants to grow quickly. Keep the plants well watered and mulched to guard against mildew attacks. On the first sign of this fungus dust the plants with sulphur, or syringe them with an antidote, such as Seride. Established rows coming into bearing should be freely supplied with liquid manure, or even clear water, to facilitate growth and the swelling of the pods. Mulching with half-decayed manure is a valuable aid

turning in; placing a leaf over the heads keeps them fresh and pure in colour. The growing leaves should be cracked across the midrib in a position sufficiently long to cover the flower, as these leaves last fresh so much longer than a separated leaf, which so soon withers during hot weather.

Potatoes, in spite of the drought, are looking remarkably well where the preparation was of the best—deep digging and liberal manuring in the autumn, and the soil frequently stirred between the rows since planting. No time should be lost in spraying the haulm for the second and last time. Many persons do not think spraying is of any value in preventing disease. I have noted that those who spray regularly have less disease than those who do not spray at all. In any case, spraying does no harm, and it certainly prolongs the life of the haulm, to the advantage of the crop. Strawsonite Bordeaux mixture dissolved in clear cold water at the rate of 20lb. of Strawsonite to 100 gallons of water is sufficient

surface, afterwards watering it in. The plants under glass should have similar attention in the matter of pruning off surplus shoots and shortening back the leaves where they are too plentiful for the fruit to obtain sun to aid ripening. Indoor plants should not be too freely fed with strong stimulants, as they are more liable to attacks of disease than outdoor plants during hot, dry weather. The first signs of disease in the leaves necessitates prompt measures being taken to arrest its progress, cutting off those affected at once and dusting the plant with flowers of sulphur.

Turnips.—Continue to sow Snowball and All the Year Round, first watering the drills to expedite germination of the seed. Directly the plants appear above the soil, dust with wood-ashes and soot. Water frequently to encourage quick growth and to ward off Turnip fly attacks, and keep the soil between the rows well stirred.

Brussels Sprouts well repay any extra attention in watering and mulching during dry weather, as, the taller the plants grow, the greater will be the crop of sprouts later on. The reason so many persons fail to grow this estimable winter vegetable well is because they defer sowing and planting too long, the consequence being the plants have not the opportunity to attain even a reasonable height. If tall-growing sorts like Matchless and Exhibition grow 4 feet high, all the better. Any plants that do not appear vigorous should have assistance in the shape of a pinch of nitrate of soda sprinkled around the plant. This stimulant will quickly give a fillip to growth.

Carrots.—Now is the time to make preparation for an early winter supply of succulent roots of the Horn type. Sow in rows in frames that have been used for Potatoes or Marrows, the soil for those crops being of the right kind for Carrots. Shade until the plants are showing through the soil; then remove the lights daily, encouraging a stocky growth. Replace them as the nights become cooler.

Swanmore.

E. MOLYNEUX.



CLEMATIS GRATA GRANDIDENTATA, A NEW AND ROBUST VARIETY FROM CHINA. IT NEEDS PLENTY OF SPACE FOR ITS VIGOROUS SHOOTS.

to the prevention of mildew, which is caused in a dry season by drought at the roots.

French Beans.—A sowing should be made in cold frames so arranged that the lights can be put on as the nights lengthen and become colder. The crop from this sowing will be found extremely useful in October. Sow thinly to enable the plants to grow sturdily, as under such conditions they will give double the crop of those drawn up by overcrowding. Selected Ne Plus Ultra and Canadian Wonder are excellent varieties. The plants already bearing in frames should be well supplied with water, syringed daily, and have the Beans picked as fast as they are ready.

Cauliflowers should be in abundant supplies of the best quality. Those plants intended for use in September and October should have copious supplies of liquid manure during dry weather, and a mulching around the plants with half-decayed manure, thus encouraging a freedom of growth which gives pure white succulent heads. Attention should be closely paid to plants just

for an acre. An ordinary knapsack sprayer of the pneumatic pattern answers well for a small patch. It is not the quantity of liquid that is required, but it should be evenly distributed over the under side of the leaves equally with the upper surface. As the early varieties ripen they should be lifted and the seed carefully stored when dry in a cool shed, selecting tubers 20z. in weight as a fair sample. The idea that it is necessary to expose them sufficiently long for the skins to become green is not now believed in.

Tomatoes.—Outdoor plants are growing freely, as they revel in hot weather as long as they are sufficiently supplied with moisture at the roots. Restrict the growth to two stems at the most, removing all side shoots as fast as they appear, and keep the leading shoots neatly tied to supports of some kind. Plants carrying full crops of fruit should have a mulching of half-decayed manure and be liberally supplied with liquid manure or a sprinkling of superphosphate of lime on the

A NEW CHINESE CLEMATIS.

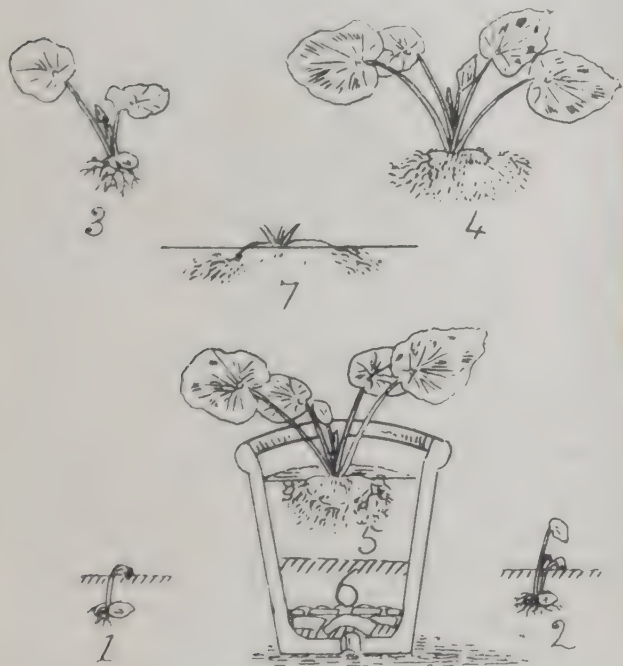
CLEMATIS GRATA GRANDIDENTATA is a new variety introduced from China by Mr. E. H. Wilson, who describes it as "a mountain plant abundant in the thickets, margins of woods and copses throughout Central and Western China." The species *C. grata* is a Himalayan climber allied to our native Traveller's Joy, *C. Vitalba*. The subject of this note is readily distinguished from the type by its larger and coarsely toothed leaflets. The leaves are pinnate, comprising five leaflets. The flowers are white, about an inch across, and, as can be readily seen in the illustration, they are terminal and axillary, forming a pleasing and attractive spray. The flowering season is the end of May and the first half of June. In common with some other Clematises, the flowers are followed by attractive silvery seed-vessels. *C. g. grandidentata* is very vigorous in growth, quite as luxuriant as, if not more so than, *C. montana*, which has long been a favourite in gardens. Suitable positions for planting are where it can ramble over and clothe arbours, summer-houses and out-buildings, or climb up and entangle at will trees and tall shrubs. Seeds, cuttings and layering form ready means of propagation.

A. O.

GARDENING FOR BEGINNERS.

HOW TO GROW CYCLAMEN.

THE Cyclamen is a very useful plant for the amateur to grow. It does not require a high temperature; it does not need a large, expensively built house; and, when in bloom, the flowers remain fresh for a long time, and as bud follows bud in development, the flowering season is a long one. One year old plants are



CYCLAMEN SEEDLINGS AT VARIOUS STAGES OF GROWTH. SEE TEXT FOR DETAILS.

valuable for flowering, and corms several years old are also valuable, so that it is not difficult to keep up a good succession when once a stock is raised.

Sowing Seeds.—At the end of July and in August seeds may be sown in shallow pans filled with good loam and leaf-soil in equal proportions. Some coarse sand must be added and, if procurable, a small quantity of old mortar rubble. Drain the pan with clean crocks and place a few half-decayed leaves on them before putting in the compost, which should be gently firmed and made smooth on the surface. Water it through a rosed watering-can, and sow the seeds an inch apart an hour afterwards. Cover them quite half an inch deep with the finer part of the compost, and place the pans in a cold frame or on a stage or shelf in a cool part of the greenhouse. The seeds do not germinate very quickly nor evenly, so that the cultivator must have patience. In the meantime he must keep the soil in the pans in an even state of moisture, and this can be ensured by immersing the pan in a vessel of water and holding it there until the water has come to the surface; then gently lift out the pan. Owing to the irregularity of the germination of the seeds, the most forward seedlings will be ready for transplanting before the later ones, and they should be lifted from the pans carefully so as to avoid disturbing the latter.

Transplanting the Seedlings.—They must be transferred to other pans and be allowed a distance of 2 inches from seedling to seedling. No. 1 shows the seedling breaking through the soil; No. 2, the next stage of development; and

No. 3, the stage of growth when it is advisable to do the first transplanting.

The First Potting.—When the young plants are as far advanced as shown at No. 4, they must be placed in small pots, small 60's—those 3 inches across—being the most suitable size.

The Young Plant is potted, as shown at No. 5, in good compost on a rougher one of similar quality; No. 6, the pot being drained with a few crocks, well placed. At the second repotting the corms will be forming freely, and the dark line in No. 7 shows how deep the corm must be buried. The crown of a Cyclamen corm increases rapidly when in a healthy condition, and if any of the central portion is buried by soil, owing to the cup-like formation, which holds moisture, some of the young growths would perish if constantly surrounded by too moist soil. Moisture resulting from watering is only harmless when the crown is above the soil-level.

The Final Potting.—A seedling Cyclamen may be flowered in a 5-inch or a 6½-inch pot. The latter must be clean, and the compost, though rougher, similar in quality to that used at previous repottings. Old corms need only have one potting. If they are just started, surrounded by sifted leaf-soil, in beds or boxes, the one potting will suffice. Of course, as old corms vary in size, pots must be used accordingly. A corm measuring 3 inches across requires a pot 6½ inches in diameter. As old corms do not possess as many roots as young plants that have been potted for some months, very careful watering is needed. The same care as is given to the seedlings will be correct for the newly potted old corms. No. 8 shows a plant finally potted; and No. 9, young plants in a frame on a bed of ashes prior to taking them to a stage in the greenhouse. If the structure is a very dry one as regards atmospheric moisture, place slates on the stage and ashes on them for the accommodation of the Cyclamen. If the interior of the house is naturally moist, put the pots on the bare stage. There should be medium atmospheric moisture and free ventilation as required; then very fine flowering plants will result.

G. G.

STARVING PLANTS IN SMALL POTS.

THE amateur cultivator is often prevented from repotting certain plants on a given date. Their condition a few weeks afterwards does not impress him very much, because they all look to be in the same state; but if a few have been repotted or planted out, then the difference is marked indeed. I lately saw several hundred Cucumber plants that had been planted in borders a week previously. One, however, had been retained in the pot. Those planted out were 20 inches high and branching out freely. The pot plant from the same batch was about ten inches high and had very short side shoots. Retaining plants in their pots a week or a fortnight longer than they should be means a big loss of valuable time, as well as poorer specimens, because if the plants receive a check, they rarely afterwards recover sufficiently to make satisfactory plants.

In another case some Perpetual-flowering Carnations were left in small pots. Others from

the same batch were duly repotted. Result: The repotted plants at the end of a fortnight were as large again as the unpotted ones. The former will be strong flowering plants this autumn, while the others will not be as good next spring—loss of time and flowers too. Many greenhouses would be much brighter if the plants were more systematically repotted as required. Fewer plants would be needed to fill the stages, and the quality of the plants would be raised.

SHAMROCK.

HOW TO DRY HERBS.

HERBS are of much value if properly treated, but they are rarely well cultivated and cared for in our gardens. In this brief note, however, I do not intend to deal with the culture, but with their treatment during the autumn and winter months. All herbs that are cut and stored must be harvested while the plants are in full flower. It is at this stage that the plants are at their full strength. To retain that strength, careful harvesting is necessary. The tops must be cut off, but not immediately tied in bundles. Adequate drying is essential first, and this is secured by spreading out the herbs on a strip of netting in an airy shed. The air can pass freely through the stems and leaves, and if spread out thinly in this fashion, turning is not necessary. When the stems and leaves are sufficiently dried, tie them loosely in small bundles and suspend them from the roof or any convenient projection in an airy, cool shed. From the time that the tops are harvested till their use they must not be openly exposed to any strong sunshine.

The Herb Plants.—Having secured the harvest of leaf and flower, the cultivator must turn his attention to the plants themselves. In the case of some of the old and weakly clumps, dig out the centres, removing roots, stems and soil bodily; then with a good rich compost fill up the hole made.

G. B.



A CYCLAMEN PLANT IN ITS FLOWERING POT, AND YOUNG PLANTS STOOD ON ASHES IN A COOL FRAME.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Late Vineries in which the Grapes are swelling freely should be ventilated with great care, especially houses in which Lady Downe's Seedling is grown. When this Grape reaches the stoning stage, the ventilators ought to be left open during the night, or many of the best berries are almost sure to become scalded. Ventilate freely during the day, opening the ventilators in front of the structure as early as the weather will permit. Regulate and stop lateral growths before they become hard and overcrowded. This will do much to produce a free circulation of air among the fruit and foliage. Well-drained borders should receive a thorough soaking of liquid manure, but never of sufficient strength to injure the young roots.

Plants Under Glass.

Begonia Gloire de Lorraine.—The earliest batch of these winter-flowering plants should now be ready for their final potting, and the soil for this purpose may be composed of turfy loam and leaf-soil in equal parts, with a good sprinkling of rough silver sand. Pot moderately firmly and shade from strong sun. Hanging baskets can also be made up now, and these will produce a very pleasing effect during the winter. Do not overcrowd the plants, and apply the syringe frequently to keep insect pests in check.

Schizanthuses.—To produce good plants for spring flowering, the seeds should be sown about the middle of August. Sow thinly in pans of fine light soil and place in a cold pit until the young plants are well through the surface, after which the pans should be raised quite near the roof glass in order to keep the plants stocky. Prick off into boxes as soon as large enough, and again into 3-inch pots later in the season. In these they may remain the winter, and the final potting can take place early in spring.

The Flower Garden.

Climbing Roses.—Many of these are in flower now, and the worthless shoots from the base of the flower-trusses should be carefully removed, otherwise the flowers are not seen to advantage. Young shoots from the base of the plants may be tied in, but nothing more than what is required to furnish the trellis next season. When the flowering season is over, as many old stems should be removed as possible, in order to make room for young growth which will produce next season's crop of flowers.

Violets.—These plants have made good growth during the last few weeks. All side shoots should be removed and the Dutch hoe frequently used among them. Syringe freely and dust the plants with soot as the best means of keeping red spider in check.

Violas.—As soon as these have finished flowering they should be cut hard back, in order to produce cuttings for next year's supply of plants. When about two inches long, these young shoots may be carefully removed from the old stools and planted in a cold frame or in some sheltered spot where protection can be afforded during very frosty weather.

Summer Bedding Plants.—Many are at their best now, and will require regulating to keep them within bounds. Pelargoniums may be the first to receive attention, and this should be done with a view to securing some cuttings for next season's display. If only one of the hardest shoots can be spared from each plant, this will be sufficient for a start. When the cuttings have been prepared, they should be inserted in small pots of sandy soil and placed on a bed of ashes in the open until the autumn, when they may be removed to some slightly heated pit and within 18 inches of the roof glass, there to remain for the winter. If small pots are available, the best method is to place one cutting in each pot, where they may remain until the spring, when they should be potted into 5-inch pots. Heliotropes, Fuchsias, Coleuses, Iresines and Lobelias may be propagated at a later date and placed in a close, cool pit.

The Rock Garden.

Hardy Cyclamen.—Most of these may be sown now in pans of sifted soil, placing them in a cool pit, where they should be protected from strong sun. When large enough to handle, they may be transplanted into boxes, allowing 2 inches between the plants. Most Cyclamen are well adapted for the rock garden, enjoying warm, sheltered nooks with partial shade and shelter from cutting wind. Good drainage is necessary, for, although they enjoy plenty of moisture at the roots, they will not thrive in stagnant places.

Campanulas.—Many varieties of these are suitable for the rockery, and may be increased by division after flowering or by seeds, which can be sown in the spring. The alpine species have obvious advantages for all kinds of rock gardens, being, as a rule, easy to cultivate.

The Hardy Fruit Garden.

Strawberries.—No time should be lost in preparing the ground for new plantations of Strawberries. That which has been occupied by early Peas or Potatoes will suit them well, but to obtain the best results the ground should be trenched to the depth of 2 feet and a good dressing of decayed manure given. When the ground has been allowed time to settle, the surface ought to be carefully broken up, in order to destroy the numerous small weeds which are certain to appear. When the young plants are well rooted, they should be carefully planted and the soil about the roots made firm as planting proceeds. The space between the rows must depend to a certain extent on the varieties selected, but for such varieties as Royal Sovereign 30 inches between the rows is not too much. Other good varieties should include Countess, Dr. Hogg, British Queen, Givon's Late Prolific, Laxton's Latest and Waterloo.

The Kitchen Garden.

Seakale.—This crop is growing freely, and may receive immediate attention to the removal of side shoots, which, if left, will reduce the size of what should be a strong single crown. After this has been accomplished, the ground can be carefully hoed and a dusting of soot given.

Lettuce.—Make frequent small sowings of Lettuce from now to the end of August, and transplant part of the seedlings for succession. Dickson's Monument, a new Cabbage Lettuce of recent introduction, is well worth a trial. Mammoth White Cos is also good for this sowing.
Royal Gardens, Windsor. JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Celery Fly.—At this season the Celery fly is often very troublesome, and means should be taken to prevent it spreading. For this purpose frequent dustings of soot applied on fine mornings are usually effective. This, however, must not be overdone, otherwise more harm than good will result. Where leaves are badly affected, they had better be collected and burnt.

Onions.—The preparation of the ground for the sowing of autumn Onions should be attended to without delay. If the ground has been previously manured for an earlier crop, all that will be required is to have the soil deeply dug and left in a rough state until the time for sowing, which should commence in about a fortnight. Meantime collect some wood-ashes and soot, to be applied to the surface when breaking down the soil for the seed-bed.

The Flower Garden.

Herbaceous Borders.—By this time many of the earlier-flowering subjects will have passed out of bloom. The faded flowers and stalks should be removed; indeed, the borders will require almost daily attention now. Later-flowering plants will require good supports against wind and heavy rainstorms, which sometimes play such havoc at this season.

Dahlias.—These will now be growing freely, and as the shoots are so easily broken off by

wind, they must be supported by looping them up to the central stake. This is a much safer plan than placing a string all round them. Should, however, extra large blooms be wanted, the shoots must, of course, be thinned out and artificial feeding be given occasionally.

Antirrhinums.—These showy bedding plants, which are now giving such a wealth of bloom, should have the old flowering shoots removed, when the laterals will throw up and give a second crop of bloom till well on in the autumn. This cutting away of the faded flower-spikes is most important, as, if allowed to run to seed, the blooming period is very much curtailed.

Planting Daffodils.—The bulbs that were lifted earlier in the season will now be quite ready for planting—that is, if the ground is available. There is nothing gained by keeping them longer in a dry state. Any ordinary garden soil will suit them, but on no account use fresh manure.

Rock Garden.

Helianthemums.—These are now giving a glorious display in the rockery, and some bold clumps placed at intervals on the higher parts of the rockery here are very effective indeed. I find they can be easily propagated by cuttings put in any time after this date. The earlier they are put in, the better plants will they make by the autumn. Insert the cuttings in a cold frame and shade from bright sunshine, and the earliest of them will be ready for planting out permanently in the autumn.

Lithospermum prostratum.—This is another rock plant that can be propagated by cuttings at this season. I find, however, it does not root so readily as the Sun Rose; but if ever a plant was worth tending carefully, then it is this Heavenly Blue, so aptly named. Insert the cuttings in pans, and place them in a cool house or frame where they will have a certain amount of shade for a time.

Plants Under Glass.

Hydrangea hortensis.—Cuttings of this useful greenhouse plant may still be rooted, but at this date it would be advisable to place these in a warm pit, so as to hasten growth before the winter. Those rooted earlier should be potted on and placed in frames, and, when sufficiently hardened, the lights may be entirely removed.

Arum Lilies.—Where these have been ripened in pots, they should now be shaken out and repotted. Place them in their flowering pots at once, using a fairly rich compost. Those that were planted out in trenches should not be potted up until they have made a fair amount of young growth.

Calceolarias.—Prick out the seedlings when large enough to handle, for, as already pointed out, they must on no account be allowed to become drawn. After being pricked out, place them again in a cold frame and shade during bright sunshine. A sharp look-out must be kept for green fly, which usually makes its appearance during hot weather, for, if once allowed to get a hold, the young plants will be crippled at the very outset.

Humea elegans.—The earliest-sown batch should now be ready for pricking out. Place the seedlings singly in small pots and stand them in a cool house where they will get abundance of light and air. Water very sparingly.

Fruits Under Glass.

Late Muscat Grapes.—Should the weather be inclined to be cold and damp, a little warmth ought to be maintained in the pipes, with a free circulation of air day and night. Examine the berries from time to time to see they are not splitting, which is usually caused from too close an atmosphere, and, if this is observed, reduce the moisture in the house and ventilate freely. Draw aside some of the foliage to expose the bunches to the sun, as every means should be taken to have the Grapes well coloured by the middle of September.

Strawberries.—The earliest runners should now be potted into their fruiting pots and stood on a hard surface where they will be exposed to the sun. Water carefully at first, and keep runners cut off as they appear.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SUNFLOWER TO NAME (R. S.).—The Sunflower referred to is probably *Harpalum rigidum*, which will grow practically anywhere. Epsom salts is not a cure for slugs.

SWEET WILLIAMS DISEASED (W. E. M.).—The plants sent were too far gone to permit us to say anything about them with certainty. Perhaps you could send others less far advanced in disease than these.

RUST ON VIOLAS (Viola).—The fungus on the Viola is called *Puccinia Algra*. Plants once attacked are generally useless, and are best rooted out. The neighbouring plants may be protected by spraying them with a rose red solution of potassium permanganate.

SWEET PEAS FAILING (W. B. B.).—The material sent is insufficient to enable us to form any accurate idea of the disease from which the Sweet Peas are suffering. The best thing to do, we think, will be to water them with a solution of half an ounce of potassium sulphate to the gallon of water.

A DISEASED PHLOX (Peach).—The Phlox plants are attacked by the stem eelworm. It is not easy, and probably not possible, to cure plants when once attacked by this pest, and we think you would be well advised to propagate only from quite healthy plants and destroy the others, treating the ground they occupy with sulphate of potash at the rate of 2oz. to the square yard. The Peach is attacked by silver-leaf, and we recommend you to root it out and plant another in its place.

PÆONIES REVERTING (R. G.).—We do not recall any instance of Pæonies reverting to the typical species, though there is not the least reason why these, as well as other plants, should not be given to "sport," i.e., produce colour variations quite distinct from the normal, though instances of such are rare. What you refer to, if it has really happened, may be of this kind, or in the nature of deterioration, which we could only say with knowledge of the individual examples. If the whole of the flowers on any plant appear to have gone from pink to magenta, we should be inclined to regard it as due to lack of cultivation; hence deterioration. If, on the other hand, a solitary flower only in a clump had changed, we should look upon it as a "sport," to prove which it would be necessary to mark the branch and later lift the clump, divide and single it out, and replant to prove. It would probably take three years to again reach a good flowering stage. We make no charge for answering queries relating to gardening affairs, and find pleasure in assisting our readers so far as we can.

PROPAGATING GAILLARDIAS (C. W. G. S.).—Apart from seeds, these plants may be increased by cuttings and root cuttings, the latter only practical during the winter months. Cuttings of young shoots may be inserted any time when procurable during the coming weeks, and you had better proceed by pruning back all flowering shoots to their bases and await the coming

of fresh non-flowering shoots, detaching these when 3 inches long with a heel from the parent stem. A cold frame or under cover of a hand-light will be found the best place, using very sandy soil. Cuttings made in the ordinary way to a joint are also useful, and both methods are worth a trial. If you do not succeed with cuttings, write us in the early autumn, and we will endeavour to give an article on root propagation.

TREES AND SHRUBS.

RHODODENDRONS SUFFERING (Ryde).—The Rhododendrons are suffering from something wrong at the roots. Either dryness or perhaps presence of lime in the soil has affected them, and the damage the roots have suffered has caused a check to the leaves. If the plants are well watered, they may grow out of it, provided no lime is present. Lime is fatal to these plants.

WISTARIA LEAVES FOR INSPECTION (Sybil Waller).—Earwigs may have been responsible for the condition of your Wistaria leaves, though we are disposed to think that caterpillars may have been the culprits. All that you can do is to spray the leaves with an arsenical wash, which will kill any insects as they feed. Such a wash may be prepared by mixing 2oz. of Paris green in 25 gallons of water and using it as a spray in fine weather. The chemical should be mixed in a little water before the bulk of the water is used. Early morning is the best time to apply such a spray. Wistarias give quite good results on pergolas, and are often grown in that way. Your plants will probably grow quite vigorously presently.

ROSE GARDEN.

CATERPILLARS ON ROSES (Jeans).—The caterpillar is that of the feathered thorn (*Himera Pennaria*). It is a "looper," and feeds on Oak, Plum and Rose. When it becomes a pest, it may, like most caterpillars, be checked by spraying with lead arsenate.

CLIMBING ROSE NOT DOING WELL (Amateur).—We fear you have rather overwatered the plant, which has somewhat checked the root action. It is better to give such Roses one or two good soakings, then mulch, than apply water too frequently in dribbles. Have the ground forked up; then put in 2 inches or 3 inches of well-decayed manure and leave it alone.

INJURY TO ROSES (Rev. R. F. C.).—We think the damage to the Roses is not due to the manure used, but rather to some insect, probably a species of bug, which has punctured the young growths. You will probably find an insect very similar in shape to the cuckoo-spit fly, which is so common, but not living as that does in a sort of spittle. It is this insect that does the damage.

CLIMBING ROSES FOR A RED WALL (H. F.).—As your house wall is red, you cannot do better than plant Mme. Alfred Carrière (white) and Rêve d'Or (creamy yellow). See that the soil is dug at least 2 feet deep and plenty of manure given to the lower soil. When planted, the Roses should be given some water, and when established they would need water and liquid manure twice a week from May to August, the liquid manure being given at each alternate watering.

ROSES FOR PERGOLA (M. M. K. C.).—We think a beautiful effect would be obtained from your pergola 77 feet in length if you planted the following ramblers that would bloom somewhere about the same time. If you preferred, you could start with the colours in the order named, or blend them to your own taste. Cream and orange—Aviateur Blériot and Shower of Gold. White—White Dorothy and Lady Blanche. Blush—Lady Godiva, Débutante and Sweetheart. Pink—Chatillon Rambler. Rose—Minnehaha. Red and crimson—Sodenia, Excelsa and Hiawatha.

CLIMBING ROSES FOR SOUTH WALL (H. P. B., Bristol).—You can obtain plants in pots now and plant them out at once. Ask for extra strong plants in 8-inch pots. Those grafted this year that have been hardened off would be best. You should dig the border to a depth of 3 feet, and work plenty of manure into the lower soil, together with some basic slag, at the rate of 6oz. to a square yard. Bury this and the manure 2 feet below the surface. When planting Roses, turn them out of their pots carefully, and, before putting on the final soil, scatter a handful of bone-flour around the plant. Water plentifully during the dry weather, and it will be as well to cover the surface soil with some very old manure, not strawy stuff; or, failing this, some spent Hops from a brewery—about 2 inches or 3 inches thick of these. You can then water over them, and the Hops will preserve the moisture in the soil better. Half-a-dozen good kinds would be Climbing Lady Ashtown, Florence Haswell Veitch, Rêve d'Or, Mme. Alfred Carrière, William Allen Richardson and Climbing Richmond.

GRAFTING CLEMATIS JACKMANNII AND OTHERS ON CLEMATIS VITALBA (Clematis).—It is not usual to graft the varieties of Clematis Jackmannii and other kinds upon vigorous plants of *C. Vitalba*, neither would such an operation be desirable, for the stock would be certain to send out strong shoots and destroy the weaker grafts. When grafting is resorted to, sections of roots of *C. Vitalba* 3 inches or 4 inches long are taken in the spring (February or March), and upon them soft shoots of the varieties, taken from plants which have been forced into growth, are grafted. Each piece of root with graft attached is then potted singly into a 2½-inch pot and stood in a moist, warm and close frame until both young roots and young shoots are formed. Cuttings may be rooted of the kinds you name if they are inserted at once in sandy soil in a close frame.

THE GREENHOUSE.

SCHIZANTHUS TO GROW (E. F. C.).—Schizanthus should be sown about August 15 in a cold frame in pots, but the seedlings should be potted (as soon as they are large enough to handle) into 3-inch pots singly and returned into the cold frame. As soon as the plants are about four inches high, pinch their tops off; this will induce the growth of many side branches, causing the plants to become bushy. A fortnight afterwards pot into 4-inch pots, and then place on a shelf in the coolest end of a greenhouse where it can have abundance of light and plenty of air when the weather is favourable. Stop the shoots again in spring about the end of March, and a fortnight afterwards shift into their flowering pots (6-inch). The chief secret of success in the growth of this plant is to keep it always in a cool, airy atmosphere. Heat and overcrowding are fatal to its success.

PROPAGATING IMPATIENS OLIVIERI (A. B. P.).—The best time to propagate *Impatiens Olivieri* is during the spring months, but it is not at all a difficult subject to strike, and cuttings may be put in even now. The best cuttings are formed of the points of young growing shoots, taken off at a length of about three inches. A few of the bottom leaves having been removed, the cuttings should be dibbled into well-drained pots well filled with fine sandy soil. Then a good watering must be given through a fine rose in order to settle everything in its place. After that place the pots in a close propagating-case in a gentle heat, such as is used in the increase of Fuchsias, Heliotropes and other soft-wooded plants. Under these conditions the cuttings will soon root, when they must be gradually hardened off and potted singly into small pots.

SWEET-SCENTED FLOWERS IN A GREENHOUSE (H. D. M.).—There are a considerable number of sweet-scented flowers available for the decoration of the greenhouse or conservatory at different periods of the year. Prominent among them are bulbs of different kinds, of which the Freesias, Roman Hyacinths and Paper-White Narcissi should be potted as soon as they are obtainable, which will be, as a rule, during the first half of August. The Roman Hyacinth is often referred to as needing to be forced, but bulbs potted in August in a greenhouse temperature will flower by Christmas. Later on come the other kinds of Hyacinths, different Polyanthus Narcissi and the Lily of the Valley. Lilies, too, are very desirable, the best for pot culture being *Lilium longiflorum* or its variety *Harrisii*, whose long, silvery white trumpets are very beautiful and sweetly scented. *L. auratum* has a more pronounced fragrance, which is admired by some. The perfume of *L. speciosum*, which is such a handsome Lily, is less marked than in those previously mentioned. Of these Lilies, the first to flower in the early summer is *L. longiflorum*, then *L. auratum*, and afterwards *L. speciosum*. The retarding of bulbs which now prevails has, however, so upset the seasons that flowers of these Lilies may be had all the year round. In any selection of sweet-scented bulbous plants *Tuberoses* must, of course, be included. Of shrubby plants that flower during the winter and early spring may be specially mentioned the deliciously fragrant *Daphne indica* and its white variety *alba*; *Boronia megastigma*, whose Violet-like perfume is of a very penetrating nature; and *Luculia gratissima*, with large, Hydrangea-like heads of blossoms. This last, however, requires a good-sized structure for its development. Soon after these comes *Cytisus racemosus*, also known by the specific name of *fragrans*. Some *Cyclamens* are also sweetly scented, while the most pronounced of the *Primulas* in that respect is the Abyssinian *P. verticillata* and *P. kewensis*. The flowers of *Rhododendron Edgeworthii* and some of its progeny, such as *fragrantissimum*, *sesterianum* and *Lady Alice Fitzwilliam*, are also very fragrant. These all bloom in the spring. Some of the *Carnations*, too, are very valuable, but can scarcely be expected to give of their best unless there is a house specially set apart for their accommodation. During the summer months you may have the *Daturas* or *Brugmansias*, with their long, trumpet-like, white blossoms; *Heliotrope* or *Cherry Pie*, admired by everyone; *Magnolia fuscata*, whose dull brownish flowers suggest Pineapple drops; the different hybrid *Nicotianas*, especially those raised from *N. affinis*; and the delicious Jasmine-like *Bouvardia Humboldtii corymbiflora*. *Humea elegans*, with its upright feathery panicles of reddish flowers, is very ornamental, but its attractive fragrance is chiefly with the flowers. Of climbers, two that can be specially recommended are *Rhynchospermum jasminoides* and *Jasminum grandiflorum*. Both flower during the summer, but the last named is later in blooming than the other. The large double German Wallflowers will, if sown in June and July, bloom quite early in the year. The flowers are deliciously fragrant, as also are those of the dull purplish-coloured *Cheiranthus kewensis*, which bloom throughout the winter. Stocks are so beautiful and fragrant as to merit a note to themselves. The tall-growing *Beauty of Nice* may be had in bloom in the winter as well as in the summer; while, by varying the time of sowing, the *Ten-Week*, *East Lothian* and intermediate varieties may be had in flower throughout the greater part of the year. Among the different subjects remarkable not for the fragrance of their flowers, but of the foliage, may be mentioned the *Lemon Verbena* (*Aloysia citrifolia*), a universal favourite, which is fairly hardy in many parts of the country; and the *Myrtle*, of which much the same may be said, and also a valuable evergreen for growing in large pots or tubs. Scented-leaved *Pelargoniums*, too, which are certainly more popular now than they were a few years ago, are very dissimilar from each other, not only in general appearance, but also in their perfume, for the pronounced scents of *Lemon* and *Peppermint*

are present among them, as well as many of their own. The Apple-scented Sage (*Salvia rutilans*) is another that can be recommended for its fragrance, while the scarlet blossoms are also very showy. Lastly, there are the different forms of *Boronia*, a class of South African Heath-like shrubs with very aromatic foliage, and the citron-scented member of the Blue Gum family, *Eucalyptus citriodora*.

QUESTIONS ON VARIOUS PLANTS (Harrogate).—1. *Begonia Gloire de Lorraine* may be flowered the second year, but it is more satisfactory when grown on annually from cuttings. Old plants that it is intended to keep should be cut partially back after flowering, and then, as soon as young shoots are pushed forth, be repotted in a mixture of loam, peat and sand. If your plant has not been touched in any way, it will now be too late to prune it, but it may be repotted, using a larger pot if necessary. 2. The cause of the leaves of your *Asclepias* turning yellow is no doubt owing to the plants being more or less starved. As they have been flowering since the spring, the pots will now doubtless be full of roots, in which case the plants will be greatly benefited by an occasional dose of some stimulant or by being shifted into larger pots. 3. *Bouvardias* of all kinds are shrubs, and therefore perennials. 4. The *Watsonias* are a genus of South African bulbous plants nearly related to the *Gladiolus*. They should now be flowering, or nearly approaching that stage. At this time they will need plenty of water, but in the winter, when dormant, must be kept quite dry. 5. There are several possible reasons for your Ferns turning yellow as described, but without inspection one cannot feel very safe in giving an answer. In the first place—and that a very probable cause—the atmosphere of the house may be too dry, as, even if the house is shaded by Summer Cloud, this is very likely to happen in hot weather. The heat and dryness of the atmosphere will encourage the increase of such insect pests as red spider and thrips, which will soon disfigure the fronds. You say the plants are not over-watered, but there is just the possibility that they have been kept too dry at the roots. A golden rule to observe in the successful culture of Ferns is that they enjoy a considerable amount of humidity in the atmosphere. 6. If the *Aubrietias* are trimmed over with a sharp pair of scissors, they will form dwarf plants for another season. Should it be desired to increase them, they can, as soon as they recover from the cutting over, be divided and planted out in a prepared bed. If it is desired to keep *Violas* over the second year, they must be trimmed when they begin to look shabby, not after the middle of August. This will lead to the production of a considerable number of young shoots, some of which may, if required, be taken off as cuttings and inserted in a shady border. Some of the *Antirrhinums* and *Sweet Williams* will flower after the second summer, but they cannot be depended upon like young plants.

FRUIT GARDEN.

ABOUT RASPBERRY CANES (Devonia).—We do not find any insect on the Raspberry canes sent, and think they have possibly been damaged by forking among them too deeply.

AMERICAN GOOSEBERRY MILDEW (Mrs. McD.).—The Gooseberries are badly attacked by the American Gooseberry mildew. You must report it to the Board of Agriculture. Spraying is, we fear, of little use. But the bushes should have all the young growths (on which the fungus is likely to be present) removed in the early autumn.

INJURY TO PEAR AND PEACH TREES (H. H. G.).—The Pear fruits appear to have been injured by cold. Probably a frosty night occurred either when the trees were in flower or soon afterwards. The leaves of the Peach are injured by Peach leaf-curl. The curl is due to the presence of a fungus (*Exoascus deformans*). Collect and burn all affected leaves to keep the disease from spreading. It is as well to remove the ends of the affected shoots below the highest good leaf, as the fungus grows into the leaf-buds near where it is present, and rests there for another year.

MEALY BUG, MILDEW AND SPIDER ON VINES (Troubled).—One of these is bad enough at a time, but the three together is no joke. For mildew and spider, the best thing you can do is to dredge your Vines heavily with flowers of sulphur, leaving it on for thirty-six hours. Spray the Vines over lightly in the evening before applying the sulphur, and keep the vinery extra warm while the sulphur is on. Use rain-water for spraying, and also for syringing off the sulphur at the end of the thirty-six hours. As regards mealy bug, your best chance of eradicating it at this time of the year is to use Bunyard's Blight Cure No. 1, from Messrs. George Bunyard and Co., Royal Nurseries, Maidstone. Apply with the brush. With perseverance you may keep it down in this way.

HOW TO GROW MELONS IN A FRAME (E. C.).—Make up a hot-bed 15 inches all round larger than the frame and 2½ feet deep. Tread it down firmly. Stand your frame on it as soon as it is made, keeping the light off for a week or ten days afterwards to let the rank steam escape out of the manure. At the end of this time place in the centre of the frame some sods of turfy loam, grass side downward, covering 2 square feet of the bed. On the top of this place a bushel of loamy soil, broken up into pieces the size of a hen's egg. Use the small with it as well. Make this into a mound or cone on the top of the sods spoken of above, and tread firmly. The top of this mound of soil should be a foot from the glass. Drive a stick into this to test the heat of the bed, and let it remain in for two days. Take it out then and feel with the hand. If it feels hot, you must not plant the Melons

until the heat has subsided. If, on the other hand, the stick is only moderately warm, you may plant at once. Place two plants in the middle of the mounds about four inches apart. As soon as the plants have made four leaves pinch the heart out of each plant. You will find they will then form side shoots. Select two of the strongest of these and pinch the others off, and let them grow without stopping until they are each 2 feet long, trailing them on the ground (or the face of the border).

THE APPLE SAWFLY (St. C.).—The Apples are attacked by the Apple sawfly. The fruits attacked will soon fall, and all should be burned as quickly as possible, so as to reduce the risk of the sawfly spreading in future years. Spraying of any kind is not a certain cure for the pest, for the fly lays its eggs either in the bud or in the open flower, generally the latter.

GRAPES BADLY MILDEWED (E. M. H.).—The only effective way of killing mildew on Vines when once it has obtained a stronghold, as it seems to have done in your case, is to spray the Vines thoroughly with rain-water, and then to dredge every part with flowers of sulphur. Leave it on for three days and then blow off with a powerful pair of bellows. Late in the afternoon is a good time to apply the sulphur.

PLUM TREES NOT FRUITING (Leicester).—Seeing that your Plum trees are still making only wood growth, in spite of the root pruning to which you say they have been subjected, we can only conclude that your soil must be over-rich, and also deficient in lime. Stone fruit will not succeed in limeless soil. Root prune again, but not too severely, as soon as the leaves have fallen, and add half a bushel of lime to the soil of each tree, well mixing it with the soil before applying.

INJURY TO APPLE TREE (Bruin).—The Apple is attacked not by a fungus or a mildew, but by an aphid, the stem aphid of the Apple, *A. Fitchii*. We recommend a thorough spraying with Quassia and soft soap, or with a nicotine compound. A suitable Quassia and soft soap wash may be made by simmering or gently boiling 1lb. of Quassia-chips in water for a couple of hours. Dissolve half a pound of soft soap in warm water and stir in the strained-off Quassia extract; then add sufficient water to make up ten gallons.

SHOT-HOLE FUNGUS IN PEACH TREE (A. J. B.).—Your Peach is attacked, apparently, by one of the shot-hole fungi, but as the fungus is not yet fruiting it is impossible to say which one. We fear all the leaves showing this spotting will drop in any case, and recommend you to spray the tree with ammoniacal copper carbonate, made by mixing 5oz. carbonate of copper into a paste with water, adding three pints of strong ammonia, and diluting the deep blue solution so obtained with water to make forty-five gallons. Make the solution in a wooden vessel.

GRAPES SCALDED (W. B. L.).—The sample of Grapes sent are badly "scalded." This is a term applied to Grapes which appear as if they have been scalded or parboiled. Scalding is caused through late or imperfect ventilation on bright sunny mornings while the Vines, and even the berries, are saturated with moisture. To stop any further mischief, have a little heat in the hot-water pipes and ventilate more freely, leaving a little top and bottom air on all night while the weather is warm, but top air only at night when the weather is cold.

KITCHEN GARDEN.

CABBAGE ROOT MAGGOT (York).—The stocks appear to have been attacked by the Cabbage root maggot. This cannot be cured, but seedlings may be protected to some extent by putting sand moistened with paraffin about the bases of their stems early in their growth.

MISCELLANEOUS.

FUNGUS ON AZALEA (J. McE.).—The fungus is *Exobasidium japonicum*. It has only recently appeared in this country, but is becoming quite common. The galls it produces should be picked off and burned.

INSECT PESTS (H. S.).—Dip the *Begonias* in the soft soap and sulphur wash we have frequently recommended for the plants. The Turnips are badly attacked by the diamond back moth larvæ, and we recommend you to dust them immediately with soot and lime or spray them with arsenate of lead.

WORM TO NAME (Curculio).—The creature sent is not an insect, but a worm which lives inside insects, such as ground beetles and the like. It leaves the bodies of these insects at a certain stage of its career, and lives for a time in the open air, but is quite harmless to plants and man. It is known as *Gordius*.

WEED SPREADING IN WOODS (Mrs. P.).—The specimen sent for identification is the Gout-weed (*Ægopodium Podagraria*). It is one of the most difficult weeds to eradicate once it has been allowed to become well established. The best method to adopt is to fork out the weed as much as possible; then, as young shoots appear above ground, keep them hoed down before the leaves have a chance to develop. By this means the weed may be gradually destroyed.

EXAMINATIONS IN HORTICULTURE (R. R.).—The principal examinations in horticulture are those instituted by the Royal Horticultural Society. They are those for the National Diploma in Horticulture, the General Examinations for all classes of gardeners, the Parks' Employés Examination for those employed in public parks, &c., and the Teachers' Examination for teachers in schools. Full particulars of these may be obtained on application to the Secretary, Royal Horticultural Society, Vincent Square, London, S.W.

NAMES OF FRUIT.—Mrs. Mamell.—The Peach was rather damaged, but we think it is Hale's Early.—*M. P.*—Black Muscat Grape.

NAMES OF PLANTS.—E. B.—*Stachys lanata*.—*Mart.*—*Ligustrum lucidum*.—*E. E. S.*, *Stoke Poges*.—*Clematis recta*.—*A. B.*—Flowers dropped and shrivelled, but probably *Begonia Corbeille de Feu*.—*Fulbourne*.—1, Spanish Broom (*Spartium junceum*); 2, *Veronica incana*; 3, *Æthionema pulchellum*; 4, *Asperula tinctoria*; 5, *Arenaria montana*.—*J. M.*—1, *Linaria purpurea*; 2, *Geranium Phœum flore pleno* (Double Dusky Crane's-bill).—*F. Green, Port Elizabeth*.—A very fine form of *Nephrolepis cordifolia*.—*S. H. B.*—*Pontederia crassipes* (Water Hyacinth).—*Alfred Althusen*.—*Sambucus racemosa*.—*R. K. H.*—*Echium vulgare* (Bugloss).—*F. E. Walsh*.—1, *Paulownia imperialis*; 2, *Olearia Haastii*; 3, *Choisya ternata*.—*W. W. B.*—*Pyrus Aria* (White Beam).—*A. Smith*.—*Linnaea borealis*.—*Seeker*.—1, *Galega officinalis* and the variety *alba*; 2, *Melissa officinalis* (Balm); 3, *Euphorbia Lathyris* (Caper Spurge).—*M. P.*—The plant is *Helxine Solierii*.

SOCIETIES.

NATIONAL ROSE SOCIETY.

THE provincial show of this society was held in the Sydney Gardens, Bath, on the 16th ult. The recent rainfall had certainly improved the quality of many Roses exhibited, and the show, as a whole, was a most excellent one for so trying a season. There was a good attendance of visitors throughout the day. The large marquee was delightfully cool, owing to its erection in a particularly favourable position.

NURSERYMEN.

The Jubilee Trophy and gold medal, offered for thirty-six blooms, distinct varieties, of exhibition Roses, were secured by Messrs. Alex. Dickson and Sons, Ledbury, with a well-finished stand, including excellent blooms of *Mme. Maurice de Luze*, *Her Majesty*, *Lohengrin*, *Frau Karl Druschki*, *Mrs. A. E. Coxhead*, *Helen Keller*, *Mildred Grant*, *Claudius*, *H. V. Machin* and *Tom Wood*. The second place was secured by Messrs. Frank Cant and Co., Colchester, who also staged some very good flowers, the finest blooms being *Mrs. Joseph H. Welch*, *Maman Cochet*, *Prince Arthur*, *Mrs. Foley Hobbs* and *Mme. Jules Gravereaux*. Messrs. Hugh Dickson of Belfast were placed third.

The Mayor's Cup, offered for seventy-two blooms, distinct, was also carried off by Messrs. Dickson, Ledbury, with an equally effective stand of well-developed blooms. They also led the way with twenty-four varieties, distinct, including *Lady Barbara*, *Mrs. David McKee*, *Countess of Derby*, *Duchess of Sutherland*, *Lady Ashtown*, *Bessie Brown* and *Mabel Drew*.

Mr. Harry Drew, Longworth, Berks, obtained the highest award for thirty-six blooms, distinct, the best flowers being *Mme. Eugène Verdier*, *Avoca*, *Ulrich Brunner*, *Suzanne M. Rodocanachi*, *Frau Karl Druschki*, *Earl of Gosford*, *Mildred Grant*, *Florence Pemberton*, *Hugh Dickson*, *George Dickson* and *Dean Hole*. *Mr. George Prince*, Oxford, was second.

Mr. Drew again scored for sixteen distinct varieties, three blooms of each.

For twenty-four blooms, distinct varieties, *Mr. John Mattock*, Headington, Oxford, was to the fore, his blooms of *Ethel Malcolm*, *British Queen*, *Edward Mawley* and *Earl of Warwick* being excellent in every respect. *Mr. Charles Turner*, Slough, was a good second, showing *George Dickson*, *Frau Karl Druschki*, *Mrs. Foley Hobbs* and *Helen Keller* in good form and colour.

Mr. John Mattock was again first for eight distinct varieties, three blooms of each; second, *Mr. Ernest Hicks*, Wallingford; third, *Mr. C. Green*, Hitchin.

Mr. Henry Drew secured first place for eighteen blooms, among which the following were in good form: *Mme. Jules Gravereaux*, *Molly Sharman Crawford*, *Mme. Leon Constantin*, *Comtesse de Nadaillac* and *Alexander Hill Gray*. *Mr. George Prince*, Oxford, followed closely with a well-finished stand.

Mr. John Mattock led the way with eighteen blooms, distinct, *Mr. Ernest Hicks* being second.

OPEN CLASSES.

Mr. George Prince secured first place for twelve blooms of new Roses, distinct, including *Mabel Drew*, *Mrs. J. Welch*, *Elizabeth*, *Mrs. W. K. Rowe* and *Mrs. Cornwallis West*, Messrs. Hugh Dickson, Limited, Belfast, coming second, and Messrs. Alex. Dickson, Ledbury, third.

For twelve blooms of any new Rose, *Mr. Elisha J. Hicks* was a good first with *Mrs. G. Norwood*, which he staged in splendid condition, Messrs. Alex. Dickson coming second with *George Dickson*, and *Mr. J. Mattock* third with *British Queen*.

For twelve blooms of any Hybrid Perpetual, *Mr. H. Drew* and Messrs. Alex. Dickson were awarded equal first, *Mr. Charles Turner* coming third.

For twelve blooms of any Rose other than Hybrid Perpetual, Tea or Noisette, Messrs. A. Dickson secured first place, *Mr. C. H. Green* second, and *Mr. J. Mattock* third.

For twelve blooms of any Tea or Noisette Rose, *Mr. H. Drew* secured first, *Mr. J. Mattock* second, and *Mr. G. Prince* third.

For twelve distinct varieties, three blooms of each, Tea and Noisette Roses, *Mr. George Prince* secured first prize, and *Mr. H. Drew* second.

PERPETUAL-FLOWERING DECORATIVE ROSES.

For five baskets of cut Roses in distinct varieties, *Mr. George Prince* was awarded first prize, *Mr. H. Drew* coming second, and *Mr. J. Mattock* third.

THE GARDEN.

No. 2229.—VOL. LXXVIII.

AUGUST 8, 1914.

NOTES OF THE WEEK.

Generous Gift to Reigate.—It is with pleasure that we learn that Sir Jeremiah Colman, Bart., so well known in horticultural circles, has purchased Reigate Hill from Lord Monson and presented it to Reigate, thus ensuring it being an open space for ever. Reigate Hill is one of the most charming spots in Surrey, overlooking a beautiful and typical stretch of English landscape. The gift is to commemorate the jubilee of the Reigate Corporation, which was inaugurated in 1863.

A Little-Known Rock Garden Plant. In *Bellium bellidioides*, a miniature plant known by the name of the False Daisy, we have one of the most charming subjects for the rockery, and yet it is a plant very seldom met with. The small rosettes of dark green spatulate leaves form quite a dense mass, above which rise the small, fairy-like Daisies in great profusion, and about two inches high, the whole summer through. It was introduced in 1796 from the Mediterranean region, and requires an open, sunny position in well-drained, stony soil, where the little stolons, about an inch long, which it continues to send out, can ramble freely and root, when it will soon make an attractive little colony. It is readily raised from seed or by division.

Pink Mallows in the Garden.—One of the most attractive hardy annuals in the garden just now is the pink Mallow, or *Lavatera rosea splendens*. We have it growing in association with the white Phlox Mrs. E. H. Jenkins, and the combination is as perfect a colour harmony as one could wish. Last year we remember seeing it growing between white Japanese Anemones, when the effect also was very pleasing. This pink Mallow is an annual to make a note of now, so that it may be included in the next seed order for sowing next spring. The seeds can be sown outdoors, but the seedlings need plenty of room and fairly good soil.

The Night-scented Stock.—During the past few weeks we have derived so much pleasure from this little-known annual that we cannot refrain from writing about it. During the day-time the plant has nothing to commend it, but early in the evening the pale lilac flowers unfold and quickly saturate the air with their delightful fragrance. We have it growing under the windows, where it is about a foot high, and there are few greater joys in the garden than to inhale its fragrance. The seeds can be sown outdoors in spring, and the seedlings do not need transplanting. It is

an annual that ought to be in every garden where fragrance is appreciated.

Sowing Seeds of Alpines.—Many seeds of these interesting plants, such as Primulas, Dianthi, Lychnis, Arenaria and a host of others, should be sown as soon as ripe. Much better results are usually obtained than if the seeds are left till the spring, as they germinate more quickly and evenly. This also applies to many of the monocotyledons, such as Lilies, Eremuri, Irises and similar plants.

cinum. The flowers are large, golden, almost butter yellow, and appear in profusion for many weeks.

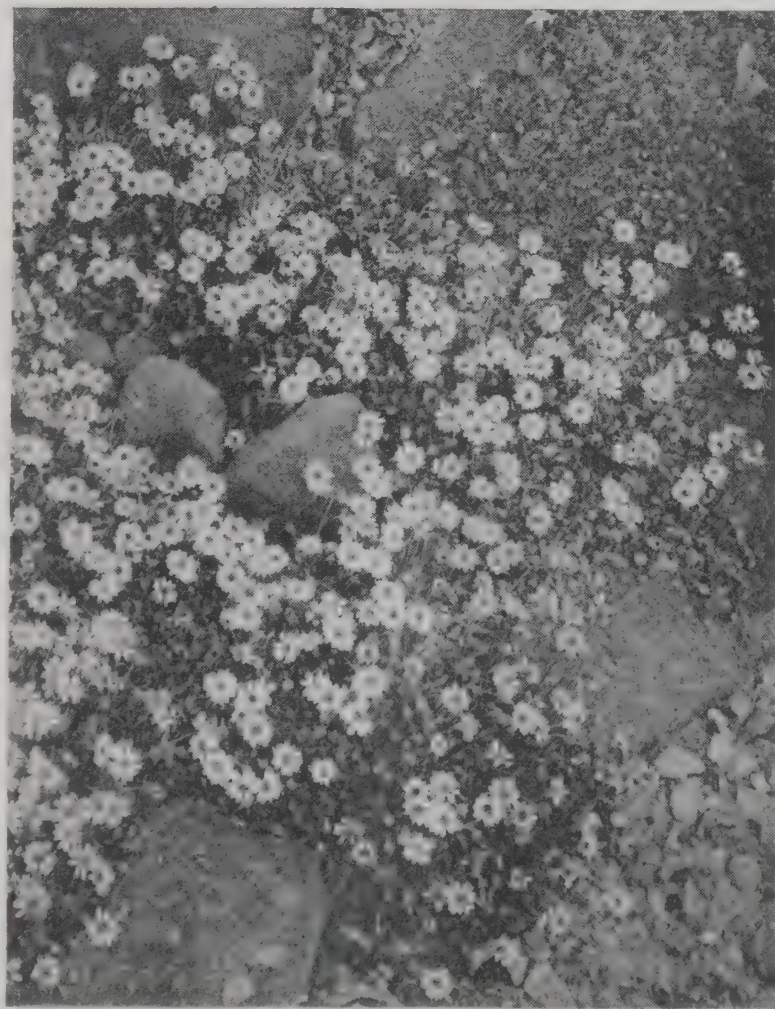
Important Notice to Our Readers.—A correspondence has been taking place in the columns of the *Advertiser's Weekly* and the *Nurseryman and Seedsman* regarding the bona fides of certain of the advertisements which are published in some of the gardening papers. So far as THE GARDEN is concerned, the Proprietors have for some years made it their practice to decline to insert any advertisement as to which there could be the slightest ground for suspicion. The result has been that the readers of THE GARDEN have learned to know that the appearance of an advertisement in THE GARDEN may be regarded as a trade mark of respectability and integrity. We have never yet gone so far as to guarantee the goods supplied by our advertisers, because with the precautions that are taken the necessity has not arisen.

A Good Crimson Rose.—One of the best crimson Roses for the garden, and one that never fails to elicit the admiration of visitors, is Château de Clos Vougeot. Unfortunately, its name is unwieldy for English tongues, but that does not detract from the merits of the flower. It is a Hybrid Tea of moderately vigorous constitution, and the large flowers are dark velvety crimson, shaded with scarlet. They are also fragrant and last longer on the bush than those of any other Rose we know, while the colour is not affected by the strongest sunshine. The only drawback to this beautiful dark Rose is its ungainly habit, the shoots growing at very awkward angles. This can, however, be largely remedied when pruning by cutting to buds pointing upwards.

The Lowberry as a Preserve.—During the last few days we have been testing the fruits of the Lowberry as a preserve, and have been delighted with the excellent jam they make. This has all the good features of Blackberry jam, minus hard cores and most of the seeds. Of

A Beautiful Hybrid St. John's Wort.—We were much charmed with a group of *Hypericum moserianum* the other day. At this season, when few shrubs are flowering and the leaves have not their autumn tints, a bright flower such as this is appreciated. If used as a groundwork for small deciduous, early flowering shrubs, such as Hamamelis, Daphnes or similar kinds, the bed can be made bright for almost the whole year. This beautiful St. John's Wort is the result of crossing *Hypericum patulum* and *H. caly*

course, many seeds are there, but not in anything like the quantities that we find in Blackberry jam. The flavour of the two is practically identical. Though not fruiting so freely as the Loganberry, the Lowberry is well worth a place in those gardens where it can be given plenty of room, preferably rambling over some rough trellis. The fruits are jet black, very juicy and sweet. It needs precisely the same treatment as the Loganberry.



THE FALSE DAISY, *BELLIUM BELLIDIODES*. THIS IS A FREE-FLOWERING PLANT IN THE ROCK GARDEN DURING SUMMER AND EARLY AUTUMN.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Sweet-Scented Rosaries.—In answer to your correspondent's enquiry for a recipe for making beads from Rose petals, she will find a full description of the method in a small sixpenny book called "Perfumes and Cosmetics," by Thomas Bales, F.G.S., and Charles Godfrey Leland. The publishers are Messrs. Dawbarn and Ward, Limited, 6, Farringdon Avenue, London, E.C.—R. DE PREE.

Ivy Growing Without Roots.—In a recent issue a reader asks, "Has anyone ever seen Ivy growing on a building without any root connection?" Yes, I have. In the inner courts of Muckross Abbey—Lord Ardilaun's demesne near Killarney—the Ivy is growing freely on the ruined wall, although the main stem has been cut away

tion as to any garden competitions or flower shows known to your readers in the County of London, and to receive suggestions as to any centres likely to promote in working-class districts the cultivation of gardens.—ARTHUR R. ATHEY, 197, Walworth Road, S.E.

The Judging of Roses.—I was always under the impression that the public were not admitted to flower shows while the judging is going on; but it appears that this is not always followed, even in important exhibitions. The reason I form this opinion is that your correspondent Edwin Molyneux, in THE GARDEN for August 1, writing on "The Most Fragrant Rose," says, concerning the recent award for the "Clay" Cup, that he watched the judges closely all the time they were engaged in adjudicating upon this particular item. Now, if the rules were strictly carried out, how would it be possible to watch every action of the judges unless your correspondent was one of them, which he implies,

the tiny grub lives and feeds until it emerges from the chrysalis as a perfect insect.—E. E. CARTER, Romford.

Maries' Balloon-Flower in the Moraine.—Experiments in the cultivation of certain plants in the moraine are extremely interesting, and it is amazing to see how many subjects which will grow in a border or on ordinary rockwork will flourish much better in the moraine. A trial of *Platycodon Mariesii* in a whinstone moraine with a subsoil of sandy loam is proving quite a gain, as the plant is not only growing well, but is flowering exceptionally freely. This *Platycodon* can, of course, be grown in a border, but there are some who find it short-lived in this position. One cannot tell positively from the results of a short trial, but there is every appearance that *P. Mariesii* will do better in the moraine than in a border here. The gravel keeps the roots cool underneath, and also absorbs and gives off gradually the heat from the sun for the benefit of the foliage and flowers. It is easy to criticise moraine planting, but the results are such as to convince the most sceptical that much advantage will be derived from its practice with many good plants.—S. ARNOTT, Dumfries.

JULY, 3 A.M.

"Flowers only flourish rightly in the garden of someone who loves them."—RUSKIN.

The dew is yet upon the Rose—
Wait! presently the breeze will shake
The blossom open to the morn—
And passing silently will close
The night flower, watching by the lake,
And turn the Lilies towards the dawn.
Carnations then, and Roses sweet,
White Jessamine upon the wall,
Will breathe their tender fragrance out;
And Sweet Peas stretch their wings to meet
The pearly dewdrops, as they fall.

And hidden in these sleeping bowers
I feel ashamed to be awake—
With dreaming foliage all about,
And noise of sticky buds that break.
The very birds are silent yet—
God is alone amongst his flowers:
The paling stars, in trembling state,
About the throbbing skies are set
To bid the eager dawn await. M. C. S.

Hardiness of *Roscoea cautioides*.—This *Roscoea*, which we owe to the enterprise of Messrs. Bees, Limited, is a charming and distinct species, which some have been chary of purchasing until its hardiness was more fully proved or until it became cheaper. I have been following its cultivation with considerable interest, as it is always desirable to know the ways of a new plant as far as possible, so that one may be successful in its cultivation. So far as I can learn, it is probably hardy in at least the less inclement districts of the three kingdoms, and in none of the places in which I have seen it has it failed. In two good gardens in Wigtownshire it has stood the past winter, and is thriving well and has flowered satisfactorily. One plant was in the fascinating garden of Sir Herbert Maxwell at Monreith, where it is in the border. Another was in the rock garden in that delightful Paradise of Logan, in the same county, the home of Mr. Kenneth M'Douall. It was in bloom there at the end of June. This distinct pale yellow *Roscoea* is worth some consideration from purchasers of new plants.—D. A.



LEAVES OF ROSE AIMEE VIBERT, SHOWING THE WORK OF THE LEAF-CUTTING BEE.

2 feet from the soil, and you can pull it away from the wall at the base. Yet the foliage is bright and flourishing. When I saw it years ago it was some 30 feet high and 12 feet to 20 feet broad, in a mass, and what a lovely ride we had through the estate!—GEORGE BUNYARD, Maidstone.

London Gardens Guild.—May I invoke the help of your readers in my endeavour to extend the gardening movement among the working-classes of London? Through the kindly initiative of Mr. Noel Buxton, M.P., the Browning Settlement has established the London Gardens Guild, the aim of which is "To promote the planting and tending of gardens in the working-class districts of London; to encourage existing garden competitions and flower shows; to develop such contests where there are none; to aim at every available patch of ground attached to private dwelling place or place of business being planted with trees, shrubs or flowering plants." The motto of the Guild is: "London a Garden City! Why not?" I should be very glad to receive informa-

tion although he does not actually say, he was not?—AN OUTSIDER.

The Leaf-Cutting Bee and Roses.—I was much interested in the note on page 387 of last week's issue, where "Heather Bell" describes his experience with the leaf-cutting bee and *Pelargoniums*. I am sending a photograph of a spray of Rose leaves taken from the climber *Aimée Vibert*, showing the damage done to the foliage by the leaf-cutting bee. This insect appears to attack some Roses more than others, *Frau Karl Druschki* and other rampant growers seeming first favourites. The bee itself is one of the solitary kind, and is about the same length as the ordinary hive bee, only a little stouter. Her black body is covered with short, brown hairs. Each leaf she attacks is rapidly cut, and the circular piece, held between fore-feet and jaws, is carried to her underground nest. The pieces so gathered are made into tiny thimbles or cells, and in each she places one egg, surrounding it with bee bread. In this leafy home

Shrubs Flowering and Fruiting.—The present is a quite out-of-the-ordinary season for the flowering and fruiting of shrubs. It is the first time *Cæsalpinia japonica* has flowered here, and plants which have produced blooms sparsely in the past, e.g., *Banksia* *Roses* and *Azara microphylla*, have been very profuse of bloom. It is the first time I have seen *Choisya ternata* fruiting, and that on one plant only; also the first time in my experience of *Chimonanthus fragrans* fruiting, though this I saw in a Southern garden, and perhaps it is not uncommon. One specimen of *Azara* here was profusely fruited, but recently the fruits have all disappeared. The garden fruits are extraordinary, Gooseberries and Currants being bent to the ground with the crops, and Apricots, Peaches, Plums and Apples all requiring an amount of thinning far beyond anything I have seen for years. Strawberries are the one sparse crop, and it would seem their failure is general.—R. P. B., *Prestonkirk*.

Rose Zephyrine Drouhin.—In THE GARDEN of July 25, page 375, "W. B. G." expresses a desire for information respecting this Rose, and from my experience I am convinced that more than your correspondent require information regarding it. My attention had not been called to this Rose till last summer, when a lady member of the family here returned from a visit to some English friends, where she had seen a bloom of it in a gentleman's button-hole, and was high in its praise, adding that "we must have it." I accordingly purchased four plants of it from a well-known English Rose-grower, and planted them in good positions. Meanwhile another plant of the same variety was received from a different source. As blooms developed on my quartet I was rather disappointed to find them small in size, rather globular in form, of a rather washed-out pink shade, and very ephemeral. I was about to express my disappointment to the young lady when she declared that the firm had not supplied the proper article, and backed up her assertion by reference to a vase filled with blooms of what she declared to be the true *Zephyrine Drouhin*, beautiful indeed, and far removed from those borne on the plants of my purchase. This led me to examine the single specimen received from another source, which had been overlooked, and this proved the correctness of the young lady's contention. But this is not all. I now looked up the list of the grower from whom I had purchased the quartet, and found *Zephyrine Drouhin* described as a "shell pink." I next looked up the list of a noted Continental Rose-grower, and found it there described as a "rosy crimson," and you now, Sir, describe it as "carmine pink." I, too, should be glad for information respecting the colour of *Zephyrine Drouhin*. The two so-called *Zephyrine Drouhins* we have here, while differing in foliage and flower, are both thornless.—CHARLES COMFORT, *Midlothian*. [The colour of this Rose is described by the National Rose Society as bright carmine pink, and this, we think, is the best description that can be given. The stems are mostly green and thornless, and the blooms very fragrant.—ED.]

FORTHCOMING EVENTS.

August 10.—United Horticultural Benefit and Provident Society's Committee Meeting.

August 11.—Royal Horticultural Society's and National Gladiolus Society's Combined Show at Vincent Square, Westminster.

August 13.—Flower Show at Taunton Dene.

ROSE-GROWING IN TOWN GARDENS.

THE advancing season has given us further opportunities of estimating the merits of our new *Roses*, as well as of confirming opinions already formed of older acquaintances. One of the fascinations of *Rose-growing* lies in adding to our collections each year some varieties of which we have had no previous experience, and there is no reason why the town gardener should deny himself this small luxury, however limited his domain, though experience will soon have taught him that he may not hope to succeed with all he plants.

But there are always a certain number of trees which should be discarded at the end of each season, and even if the grower finds he has added to their numbers, it is not all wasted effort, for he has added to the sum of his knowledge, and occasionally he will chance upon a discovery that will reward him for his pains. Last autumn I obtained a few plants of a charming little *Rose*, *Mevrou Dora von Tets*, choosing it merely from a catalogue description, and have been delighted with the result. Rather resembling *Richmond*, it is freer in growth, and even more profuse in blooming. In colour it is rather darker, being a full rich crimson, which lasts well even in bright sunshine. It is a thin *Rose*, and will hardly give a flower of exhibition size; but each one is of beautiful shape, and it makes an ideal bedding *Rose*. It is fragrant, and does not seem given to mildew, so that none need avoid it. The National *Rose Society's* official catalogue makes no mention of this *Rose*, and but few nurserymen in this country appear to have it in their lists; but in conversation with one the other day I learned that he had been much impressed by it and had budded a large quantity in anticipation of a big demand when its merits are better known.

Of *George Dickson* I write more reluctantly and with some diffidence, but must confess to some disappointment in finding it so easy a mark for mildew, and though there can be no question of its vigour, I suspect it a little of being inclined to the production of wood at the expense of flower.

A *Rose* that has proved its suitability for town gardens is *Mrs. Charles Curtis Harrison*, a bedding variety of carmine and crimson pink colouring, which does not fade into an ugly colour as many of similar shades do. This is one of the newer varieties which have been rather overlooked, probably because of the preponderance of pinks; but it is very distinct, and is a beautiful and shapely *Rose*, with stiff and well-formed petals, alike useful for garden or exhibition.

The free use of the hoe upon *Rose-beds* is to be commended at all times, but great care should be exercised in doing the work. Many roots are near the surface, and to break and injure these will cause a set-back to the plants. The hoe used should always be a narrow one, and only the top inch or 2 inches of soil ought to be disturbed. By the way, a most useful instrument can be made by fastening a light three-pronged garden hand-fork upon a broom handle, and with this the surface of the *Rose-beds* can be pricked over with a minimum of effort.

P. L. GODDARD.

HARDY HIMALAYAN PRIMULAS.

THE hardy species of *Primula*, so far as at present known, include about seventy varieties. A considerable number of these have been in cultivation for a good many years, and there can be little doubt that a large proportion of those which are not yet to be seen outside botanic gardens, or a few other collections of more than usual size, will be found hardy enough to stand the trials of our climate. Of those which are cultivated, a certain number are liable to rot off at the crowns during a wet winter, but they are generally hardy.

The fullest account of the *Primulas* of the Himalayas at present to be met with is that entitled "Observations on Indian *Primulas*," by Sir George Watt, C.I.E., M.B., C.M., LL.D., which was read before the Horticultural Club in 1904, and republished in the *Primula Conference Report* of the Royal Horticultural Society, 1913. This was supplemented at the conference by a paper by Mr. W. G. Craib, M.A., entitled "Notes on Himalayan *Primulas*," and also published in the *Conference Report*. This is a review of the work done since the appearance of Sir George Watt's contributions. These papers, with the monograph by Pax in Engler's "Pflanzenreich," contain practically all our knowledge of these *Primulas* from a botanist's point of view. It is my object to discuss them from a horticultural standpoint.

***P. bellidifolia* (King).**—This belongs to Pax's section *Capitatae*; it is closely related to *P. farinosa*, and, as Sir George Watt well remarks, may be considered a large condition of *P. farinosa*, our Bird's-eye Primrose. It comes from Sikkim, where it grows at an altitude of 13,000 feet. It has good-sized heads of many bluish purple flowers. It conforms to the same treatment as *P. farinosa*.

***P. capitata* (Hook. f.).**—One meets with many who fail to discriminate between *P. capitata* and *P. denticulata*, but those who have seen the two together will at once recognise their great distinctness. *P. capitata* is easily recognised by the dark blue colour of the narrow, bell-shaped flowers in a close head, the outer blooms being pendent; but an unfailing means of differentiating between *P. capitata* and *P. denticulata* lies in the fact that in the former the scape rises with the leaves, and does not precede them, as is the case with *P. denticulata*. This is mentioned because some of the colours now seen in the varieties of the popular *P. denticulata* closely approach those of *P. capitata*. *P. capitata* is a handsome species, a foot or more in height. Sir George Watt considered this possibly only an alpine form of *P. denticulata*. The leaves are frequently farinose, but the forms without meal are the hardiest. In cultivation *P. capitata* is usually only a biennial, but in some places it is perennial, and in others it flowers and sows itself quite freely. There is an interesting double-flowered form of this variable species.

***P. denticulata* (Smith).**—It is almost unnecessary to say much regarding this well-known and favourite species. It is one of the easiest to grow, but resents drought, and suffers greatly in dry positions during hot weather. It is the most abundant of the Himalayan *Primulas* in a state

of Nature, and extends over a large portion of the Himalayan regions, where it is generally found on grassy hillsides. It varies greatly in size, and in cultivation it is most variable in colour. We now have many varieties, not only of *P. denticulata* type, but also of the form *cashmeriana*, which is mainly distinguished by the beautiful farina on the under surface of the leaves. There are many forms passing under various names, such as *alba*, *major*, *minima*, *maxima* and others, while the colours range from white through shades of purple and lilac and rose. It is quite hardy, but sometimes suffers in variable winters by water lodging in the crowns.

***P. elongata* (Watt).**—A *Primula* which is nearly allied to the well-known *P. sikkimensis*, but still more nearly to *P. obtusifolia*, is *P. elongata* from Sikkim, where it grows at heights of from 11,000 feet to 12,000 feet. The flowers are yellow and very delicate, with petals which are thin,

leaves, and also by it having the flowers on short but distinct pedicels, while those of *denticulata* are sessile or nearly so. This may be considered a geographical form of *P. denticulata*. It comes from Kumaon and Bhutan, but is not found in Sikkim. The flowers are of much the same colour as in *P. denticulata*. When first shown in London, *P. erosa* was described as having larger flowers, but this is not the case.

Morelands, Duns.

JOHN MACWATT.

(To be continued.)

LEWISIA HOWELLII AS A MORaine PLANT.

THE illustration of this interesting plant was taken in the nursery of Messrs. Wallace and Co., Colchester, in the early days of June. This plant, which is growing in a moraine, is of exceptional interest by reason of its free-flowering propensities.



LEWISIA HOWELLII GROWING IN A MORaine. THIS PLANT PRODUCED OVER FOUR HUNDRED FLOWERS THIS YEAR.

smooth and veined. It has the smooth leaves of *P. sikkimensis*, but the corolla tubes are much elongated. *P. elongata* is not difficult to cultivate under the same conditions as *P. sikkimensis*.

***P. Elwesiana* (King).**—Handsome though this is, it is not so easy to cultivate as many of the Himalayan species. *P. Elwesiana* comes from Sikkim, where it grows at a height of about twelve thousand feet. It is worthy of any amount of attention from those who are fortunate enough to possess it. It is rather pubescent, although the leaves are coriaceous, and has large, solitary flowers of purple or violet. It belongs to Pax's section *Omphalogramma*, and is nearly related to the charming *P. vincaeflora*.

***P. erosa* (Wall.).**—Pax places this among the *Capitatae*, and it is very closely related to the popular *P. denticulata*. It is distinguished from the latter by its very large and thin erose

leaves, and also by it having the flowers on short but distinct pedicels, while those of *denticulata* are sessile or nearly so. This may be considered a geographical form of *P. denticulata*. It comes from Kumaon and Bhutan, but is not found in Sikkim. The flowers are of much the same colour as in *P. denticulata*. When first shown in London, *P. erosa* was described as having larger flowers, but this is not the case. It has ten branched flower-spikes, each with from thirty to sixty buds and expanded flowers. The illustration scarcely does justice to this wonderful specimen, which carried over four hundred flowers this year. This plant has stood two winters, and is now better than ever. Its chief requirement appears to be thorough drainage, such as only a well-made moraine can give. As the *Lewisia* belongs to the same Natural Order as the *Portulaca*, otherwise known as Purslane or Sun Plant, it is, perhaps, not so surprising that it thrives when given perfect and thorough drainage and an open, sunny position. Unfortunately, a good many who would like to cultivate this charming and interesting plant find it very difficult to manage, especially when only given ordinary rock garden treatment. The success achieved in this instance may act as a guide to those who have tried the plant and failed.

THE DAFFODIL IN AUSTRALIA AND NEW ZEALAND.

I SUPPOSE there are some people who are observant by nature, and some who are not. I never do know the colour of Mrs. So-and-so's new gown, or what sort of hat Miss What-do-you-call-her wore at that garden-party. Until I had a house to furnish, I never seemed to realise any great difference between chairs and tables, but when the necessity arose I never saw any chairs or tables alike. History has repeated itself with me in the case of the Daffodil in Australia and New Zealand. I knew that there were people there who grew the flower. I even knew that people of the names of Thomas, Rhodes, Clark, Miller and Buckland had started the fascinating game of hybridising, and that they had turned out some good seedlings; for pictures now and again found their way to Whitewell, and I had seen a real New Zealand-raised bloom in one of Mr. A. M. Wilson's collections at Vincent Square last year. Further, I knew from what Miss Currey used to tell me years back, and from information given me by my old friend Kingsmill about the celebrated syndicates of the late nineties, that some of the very best of our home-raised varieties were going to those regions year after year. I knew that there were shows at such places as Melbourne and Auckland and Christchurch.

But I had no idea of the vast extent to which the cultivation of the Daffodil had spread, more especially in New Zealand; nor of the great army of seedling-raisers already at work; nor of the network of shows; nor of the large quantities of the better sorts that are yearly passing from us to them. All these things were a revelation, and, unless I had had to forage about for material for the 1914 Royal Horticultural Society's "Daffodil Year Book," in all human probability they would still have been unknown, and the writing of this present article no more possible than for me to chronicle the doings of the Martians in Mars. Let me deal, then, in orderly sequence with my subject, and, for the sake of clearness, let me divide it into "heads"—"Growers," "Seedling-Raisers," "Shows," and "Dealings."

Growers.—Casual words frequently reveal more than set phrases or sentences. The casual words here are the prominence given to the Daffodil in such papers as the *Farm Journal* of Sydney (August 1 and September 1, 1913); the *Weekly Press* of Christchurch; the *Otago Witness* of Dunedin (October 8, 1913); and the *Weekly Graphic* of Auckland (September 18, 1912). Illustrations in quantity and columns of space are not given by editors to anything and everything. When we do find them, they betoken a public who want them. These, of course, might not be growers. What, however, can be the meaning of a catalogue like that of Messrs. W. H. Higgins, Limited, of Geelong, Victoria, with thirty pages out of forty given up to Daffodils; or Reilly, Gill and Co.'s (Dunedin) list of 276 varieties, but that someone wants them for their garden? Why is it that little spring shows are rising up like mushrooms all over New Zealand, and that in them Daffodils are invariably the leading feature? Why does St. John's Church, Fielding

(Wellington), or St. Luke's, Rotorua (Auckland), or Palmerston North, or the Presbyterian Church of Cambridge (Auckland) have a Daffodil society or an exhibition where Daffodils are the flowers? Why? Because there are people in their midst who are growing them. A few large shows like those of Dunedin or Auckland or Christchurch need not indicate a wide interest. A multiplicity of small ones does so.

Seedling-Raisers.—I am unable to say very much about the seedling-raisers of Australia. To begin with, as far as I know, Daffodil cultivation is confined to New South Wales and Victoria; but why South Australia should not join in I cannot imagine. Perhaps it does and I do not know it. If so, there may be a seedling-raiser or two there. In the other provinces, as far as I have been able to ascertain, there are but five or six of any wide repute—Messrs. Leonard Buckland, Alister Clark and D. V. West in Victoria, and Messrs. H. Selkirk, H. H. B. Bradley and Arthur Yates in Sydney. Mr. Clark specially goes in for triandrus hybrids; Mr. Selkirk, in the warm climate of Sydney, finds Tazetta hybrids (tridymus and Poetaz) the most satisfactory; Mr. Bradley, the secretary of the New South Wales Horticultural Society, goes in more for all-round hybrids; Mr. Yates, ditto; Mr. L. Buckland has been very successful of late years, and has won the Boyce Cup for twelve seedlings at the Royal Horticultural Society of Victoria Show. In the Ballarat Show, in the forty-eight class he had about twenty-four of his own seedlings in his collection. Two of his very best are named Pink 'Un and King of the Poets. Mr. D. V. West has been hybridising for many years and has produced some fine flowers. A Leedsii of much the same proportions as White Emperor won the premier prize for a single bloom in that division at the last Ballarat Show; and his beautiful white Apex, Mrs. D. V. West, received, as long ago as 1911, a first-class certificate from the Victoria Daffodil Conference. He most kindly sent me two photographs of it, one of which is reproduced on this page. The other, together

with an English photograph of a Penzance-grown Mrs. D. V. West, are to appear in the Royal Horticultural Society's "Daffodil Year Book." By the way, now that I know exactly what will be in it, might I suggest that half-a-crown spent upon a copy will be half-a-crown well invested. It was published on August 1, and may be obtained, post free, from the Secretary, Royal Horticultural Society, Vincent Square, Westminster, for 2s. 9d.

I believe what Mr. West says of Victoria is likewise true in spirit of New South Wales hybridisers:

"I think there are only three who have been raising for over ten years, although *there are many more of recent years.*" We do not know what surprises may be in store when these new recruits have become veterans and given the public a sample of their wares. We do not even know all the quiet work that is going on in our own islands. I was surprised when, at one of the Royal Horticultural Society's shows this spring, my young friend, Mr. Guy Wilson of Knowhead, Broughshane, said, "I have got something to show you

of *Irish Gardening*, as his did this last June! But what of New Zealand? Recording his impressions in his celebrated tour of the world, the later Peter Barr is reported to have said in Melbourne (Victoria) that "the folks in New Zealand talked Daffodils morning, noon and night." Had he timed his visit for September, there is little doubt but that he would have seen, even then (1900), that they do more than talk. He would have seen fine collections staged and keen competition at the large shows; and had he visited

the homes of many, he would have seen larger or smaller quantities of seedlings of varying ages. In 1897, in the first year of the Dunedin Show, there was a class for New Zealand-raised seedlings, which was won by Mr. Thomas Cranwell. But the credit of being the first to flower a home-raised bloom belongs to Mr. Biggs, who in 1879 fertilised gloriosa (Tazetta) with breviflos, and as a result had two plants of the tridymus type, which, flowering first in 1886, still flourish in his garden.

Probably the best-known names in the two islands are those of Professor Thomas of Auckland and the late Mr. Mason of Wellington in the North; and of the Hon. R. Heaton Rhodes and Mr. A. E. Lowe of Otahuna, Christchurch, of Mr. H. Hart of Lawrence, and of Mr. Andrew Miller of Dunedin in the South. These, however, are by no means all. Just take some of the names that I am acquainted with: Messrs. Lennie, Grindrod, J. G. Davies (the first man to get an award—1899—for a New Zealand-raised flower), Wilson, Maclean, Haggitt, Findlay, Trevena, Gibson and Branthwaite. Then imagine the goodly number that I do not know, and you will be able to form some estimate of the extent to which this fascinating hobby is being taken up by those who dwell in "The Long White Cloud." JOSEPH JACOB.

(To be continued.)

MUEHLENBECKIA COMPLEXA AS A WALL PLANT.

WE are accustomed to see the slender, wiry stems and elegant leafage of this charming little trailer spreading prostrate over the boulders of a rockery, or sometimes hanging over the face of a retaining wall; but when visiting the Suffolk town of Wood-

bridge, some beautiful examples were seen treated as climbers, in front of houses by the roadside. Some of the plants thus growing must be of a great age, judging by the wall space covered and the thickness of the main branches or stems. The method of treatment is to nail the leading growths to the wall and let the shorter side shoots hang free. In the course of a season or two the plants assume considerable proportions, and present a delightful appearance quite distinct from any other climber.

HEATHER BELL.



NARCISSUS MRS. D. V. WEST, A BEAUTIFUL NEW VARIETY RAISED IN AUSTRALIA. IT HAS BEEN FLOWERED IN THIS COUNTRY.

in the annexe," and when we got there, unearthed from under the staging a narrow flower-box full of his own seedlings! Real beauties, too, some of them were. For a certain number of years now he has been a visitor at Birmingham and London, and I had fully realised his fondness for the Daffodil; but I had no idea that all the time he had been quietly working and crossing, and that suddenly he was going to burst out as a full-blown hybridiser and raiser of seedlings; for what else can I call anyone whose exploits fill a whole page

GARDENS OF TO-DAY.

SHENDISH, KING'S LANGLEY.

A LARGE and beautiful rosary makes an imposing feature in Mr. T. N. Longman's delightful gardens at Shendish, King's Langley, Herts, and it was our good fortune a few weeks ago to see the Roses in the height of their beauty. The rosary is of formal design and partly sheltered by a belt of coniferous trees, which, however, are far enough away not to exclude the sunshine so essential for the well-being of Roses. In the centre of this garden of Roses is a large circular bed of Caroline Testout in both bush and standard trees. This grand old Rose still holds its own as one of the best, if not *the* best, of all the bedding Roses. Only one colour is allowed in each bed, and Lady Battersea, General Macarthur, Mme. Ravary, Lyon, Hugh Dickson, Mrs. Kershaw and Dean Hole are foremost among the varieties occupying surrounding beds, each doing its utmost to outrival its neighbour in producing a wealth of ever-welcome blooms. There are other varieties, too, worthy of special note among the thousand Rose plants which make up this beautiful rosary, and among them we see Richmond, Mme. Leon Pain, La Tosca, Clara Watson, Warrior and Antoine Rivoire. Perhaps La Tosca and Warrior are two of the most profusely flowered. The latter, with its deep Mulberry red flower-buds,

is literally smothered in bloom, and both of them may be relied upon to flower freely, however unfavourable the season may be. One corner of this Rose garden is devoted to single Roses, all emanating from Ireland. Irish Elegance is unquestionably the best of the bunch; but Irish Brightness, Irish Glory, Irish Modesty and Irish Harmony each gives a glowing account of itself, and all of them are much sought for in the decoration of tables. Grass paths separate the Rose-beds, and each bed is fringed with some free-flowering Viola of blue or mauve shade, the varieties most in evidence being Royal Blue, Mrs.

Chichester, Maggie Mott, Mauve Queen, Magpie and Kitty Bell. On the outside of the Rose garden, Roses of more or less rambling habit, like Penzance Briars, Sweet Briars, Grüss an Teplitz and Thermidor (the last named a white Rambler that flowers with great freedom), lend pleasing touches of colour that link up with the pleasure grounds beyond. A little Dutch garden situated quite close to the house is likewise well provided with Roses. Here the Dwarf Polyanthas Mme. N. Lévavasseur and Maman Lévavasseur, otherwise known as Baby Crimson Rambler and Baby Dorothy Perkins, are used with telling effect.

On another side of the house we observe beds of China Roses even more heavily laden with bloom than the bedding Roses already referred to. The two China Roses that appear to be doing the best of all are Fabvier (scarlet, white centre, and borne on stiff stems) and Mme. Eugène Résal, with a brilliant rose yellow base to the petals which is very effective.

A Delphinium Border.—One of the most delightful features of these gardens at the present time is a long and imposing border of stately Delphiniums. Mr. G. Burrows, the genial head-gardener, whose whole interest is wrapped up in the beautifying of these gardens, has for some years made a point of selecting his own Delphiniums from seed and raising a number of plants each year, with the result that he now has a unique collection of unnamed varieties under his care. Pale blue varieties seem to predominate, although deep purple and reddish purple shades are well represented. Mr. Burrows' method of culture is briefly as follows: Seed is sown at the end of July in boxes and placed in frames. In the spring the seedlings are planted out in a border, with the result that they flower in the following



A VIEW IN THE ROSE GARDEN AT SHENDISH. VIOLAS ARE SUCCESSFULLY USED AS EDGINGS TO THE ROSE BEDS.



BROAD STONE STEPS LEADING FROM THE ROCK GARDEN.

September. The best varieties are then selected and planted in their permanent positions in the border, where they may be expected to flower at their very best in the third year. In the spring the growths on established plants are thinned to five or six to avoid overcrowding. The border is edged with *Nepeta Mussinii*, an extraordinary floriferous plant, making dense, prostrate tufts with numerous spikes of little lavender flowers. This valuable subject is extensively used at Shendish as an edging to the flower borders. In addition to the *Delphiniums*, there is another blue border devoted to *Veronica spicata*, the plants being so well grown that they were not at first recognised. This border is also edged with *Nepeta Mussinii*, the free-flowering Catmint, making a charming study in blue.

Rock and Water Garden.—The rock garden, situated on the site of an old chalk pit, is built on a slope facing west, and beyond is a beautiful glade and a dell or wild garden where *Rosa Brunonii* (a synonym of *R. moschata*), a climber with yellowish white flowers, is naturalised, with most pleasing effect. *Geranium Endressii*, a Pyrenean species with pale rosy flowers, is also naturalised in the dell, where it is associated with hardy Ferns. Millstone grit and Derbyshire limestone have both been used in the making of the rock garden. Stepping-stones are placed here and there in grass paths, and these are quite in keeping with the stone steps, which, by the by, are furnished with low-growing alpines, such as *Campanula pulla*, *C. pusilla* in variety, *Arenaria*, *Erinus alpinus*, *Thymus Serpyllum*, *Dianthus cæsius* and *Sedums* in variety. A wealth of colour was created by *Campanula muralis*, Rock Roses and innumerable varieties of alpine Pinks and Phloxes at the time of our visit. The shrubby *Ozothamnus rosmarinifolius* is used to good effect in the background, its pleasing white flowers resembling those of a shrubby *Spiræa*. *Viola gracilis* is also very showy, while the patches of *Gentiana verna* and *G. acaulis* tell of the superb effect made earlier in the season.

The water garden, backed by stately Oaks and situated on a slope to the west, is happily conceived and planted with good taste. The Japanese Iris *Kämpferi* is grown with marked success, and the same may be said of the Siberian Flag, or *Iris sibirica*. English and Spanish Irises also flower well, but with the latter it is found necessary to plant annually. The Goat's-beard (*Spiræa Aruncus*) and the Royal Fern (*Osmunda regalis*) make noble pictures on the banks.

A notable feature of the gardens at Shendish is seen in the magnificent sweep of lawn, including one of the finest bowling greens in the county. The house and gardens are situated at the top of a prominent hill 480 feet above sea-level. At the foot of the hill nestles a pretty little village with its own church and village green, and the model cottages are the homes of farm and garden hands on the Shendish estate.

MAKING NEW STRAWBERRY-BEDS.

WITH the coming of August the time for preparing new Strawberry-beds arrives. There is perhaps no fruit more easily grown or one which so gratefully repays a little extra care in cultivation. Its shallow-rooting nature renders it particularly liable to suffer from drought, and the preparation of the soil must therefore be carried out with this fact in mind. If the ground can

tended, a small crop may be expected the following year. The advantages of planting the small pot plants offered by nurserymen are many, and for those to whom time is a consideration they amply justify the extra cost. It is always the earliest runners (and therefore the strongest) that are laid into pots, and, furthermore, the roots suffer little or no disturbance on replanting.

In the matter of soil, the Strawberry is most accommodating. It may be found in the heaviest clay and in the lightest sands. Naturally, a rich loam is most suitable; but, failing this, much can be done in improving dry soils as before described and in lightening heavy soils by lime or mortar rubbish, always remembering that the most important point is the water supply. The distances for planting vary much, some preferring to plant 3 feet apart in the row and between the row, others making two rows at 2 feet apart and having a wider space for a path between every two rows. Where several varieties are grown together, it is a convenience to make the rows run the shortest way of the bed, so that each variety is in small blocks rather than long lines.

The plants, when safely through the danger of drought, should need no further attention until the spring, except in so far as a supplemental supply of manure is concerned. A liberal use of stable manure, with an addition of wood-ashes to supply the necessary potash, will provide all that is necessary. If, however, manure is not available, spent Hops, leaf-mould or rape dust should be given with 1 lb. of sulphate of potash for each 40 square yards in the winter, and in the spring 8 lb. of superphosphate and 2 lb. of sulphate of ammonia for the same area. Having briefly dealt with cultural matters, it remains to suggest a few varieties which will give a good succession of fruit.

The earliest fruit in most gardens is *Vicomtesse H. de Thury*, which, unlike most early fruits, possesses an excellent flavour. For the second earliest variety *Royal Sovereign* still stands unbeaten, and *Presi-*

dent is quite one of the best varieties for the main crop. It has some of the old "pine" flavour. A little later on there comes *The Bedford*, a new-comer which has made its way to the front, as it possesses good size, first-class flavour, and is a constant bearer. In season it will follow the first two named. Of the later sorts *Givon's Late Prolific* is quite the finest. The vigorous foliage keeps the plant in good health, and the crop is produced over a very long season. This list would provide a good selection for gardens of medium size, and are of varieties which can be relied on without any very special cultural attention. For those who regard flavour of much more consequence than production of fruit and vigorous growth, *British Queen* and *Dr. Hogg* cannot be omitted. Among the newer



A WATER GARDEN SCENE IN THE GARDENS AT SHENDISH, KING'S LANGLEY.

therefore be trenched 2 feet deep and well-rotted manure incorporated in the soil, this will aid greatly in conserving the moisture. In these days of motor-cars it is well perhaps to add that, failing stable manure, leaf-mould or spent Hops will serve the same purpose, but these will need to be supplemented with chemical manures.

Any garden which has been well cultivated and manured for vegetable crops will not need this special attention, and in this case the manure will be better added at a later period. The great advantage of August planting is that the young runners may make good growth before the winter, and therefore no care should be spared to keep them well watered should a dry time follow their planting. From good runners thus

sorts Hibberd's George V. is one of remarkable promise, coming about two weeks later than Sir Joseph Paxton, and produces a large number of fine scarlet fruits of firm flesh and excellent flavour. This is without doubt a variety of the future, and before long will be found in all gardens.

I cannot conclude without recommending once again the valuable service rendered by the autumnal Strawberries, of which so many have been produced within recent years. The two varieties which have shown the greatest promise are the Merveille de France and St. Fiacre autumnals. Both of these may be relied on to give a crop of fruit of first-class flavour from the middle of August till September, and in sheltered positions even later. A corner should be found for these in every garden, as they

We generally sow the seed the last week in August, and pot off the resultant seedlings as soon as possible in 2½-inch pots, placing them in a light position, yet not in the direct rays of the sun. A frame outdoors having a northern aspect is excellent. As soon as growth has become active, pinch out the growing point and repeat it later, but the second time pinch all the laterals as well. This will lay the foundation of a strong, well-branched plant. Before the plants get root-bound in the pots (and this must never be allowed to occur, as the plants may as well be thrown out as allowed to flower), a further move into 5-inch or 6-inch pots must be given. The 5-inch pots are perhaps the best, as it is not wise to over-pot them. They are impatient of careless watering and drought, either extreme proving fatal to one's hopes. Steadily keep to the pinching and repotting,

they may be top-dressed with the same mixture as advised for the final potting. They may then be given a little diluted cow-manure, gradually increasing the strength of it until the flowers look ready for opening, when it is best to cease. They may then be moved to the conservatory.

CHARLES TROTT.

Ewood Hall Gardens, Mytholmroyd, Yorkshire.

NEW AND RARE PLANTS.

Petunia Purple King.—A very handsome double-flowered variety, colour imperial purple, of a rich intense shade. Very striking and distinct. From Mr. A. E. Billingham, Broadway, Croydon.

Erica vagans St. Keverne.—A very charming bright rose pink flowered variety of a beautiful plant. When sufficiently plentiful it will be sure of a warm welcome. Shown by Mr. P. D. Williams, Lanarth, St. Keverne, Cornwall.

Carnation Mrs. F. G. Bealing.—A salmon pink coloured border variety, showing considerable freedom of flowering. From Mr. F. G. Bealing, Bassett, Southampton.

Lælio-Cattleya Miss Louisa Fowler (Lælio-Cattleya callistoglossa × Cattleya granulæa).—Sepals and petals mauve, lip rich purple. A very beautiful variety. From Mr. J. Gurney Fowler, Pembury, Kent.

Cattleya hardyana rubens.—Large purple lip, with rosy mauve sepals and petals. From Mr. J. Gurney Fowler.

Oncidium Leopoldii Fairlawn Variety.—The predominating colour is mauve, shaded with green, the inflorescence bearing a considerable number of flowers. Shown by Mr. H. Goodson, Fairlawn, Putney.

Cattleya Astron (Cattleya Dusseldorfi variety Undine × C. Harrisoni alba).—A very charming white form, the widely winged sepals and petals and lip slightly touched with yellow in the throat, making up a really beautiful flower. Shown by Baron Bruno Schröder, Englefield Green.

The foregoing were shown before the Royal Horticultural Society on the 28th ult., and each received an award of merit.

Gladiolus Loveliness.—A delightful mingling of pale pink and cream, with yellow shading, in a flower of fine texture and splendid proportions. Some grand spikes were shown. First-class certificate.

Gladiolus Fire King.—A magnificent variety of flame scarlet colour. The spike is very fine.

Gladiolus Armagnac.—This splendid variety is coloured crimson, with a conspicuous white throat.

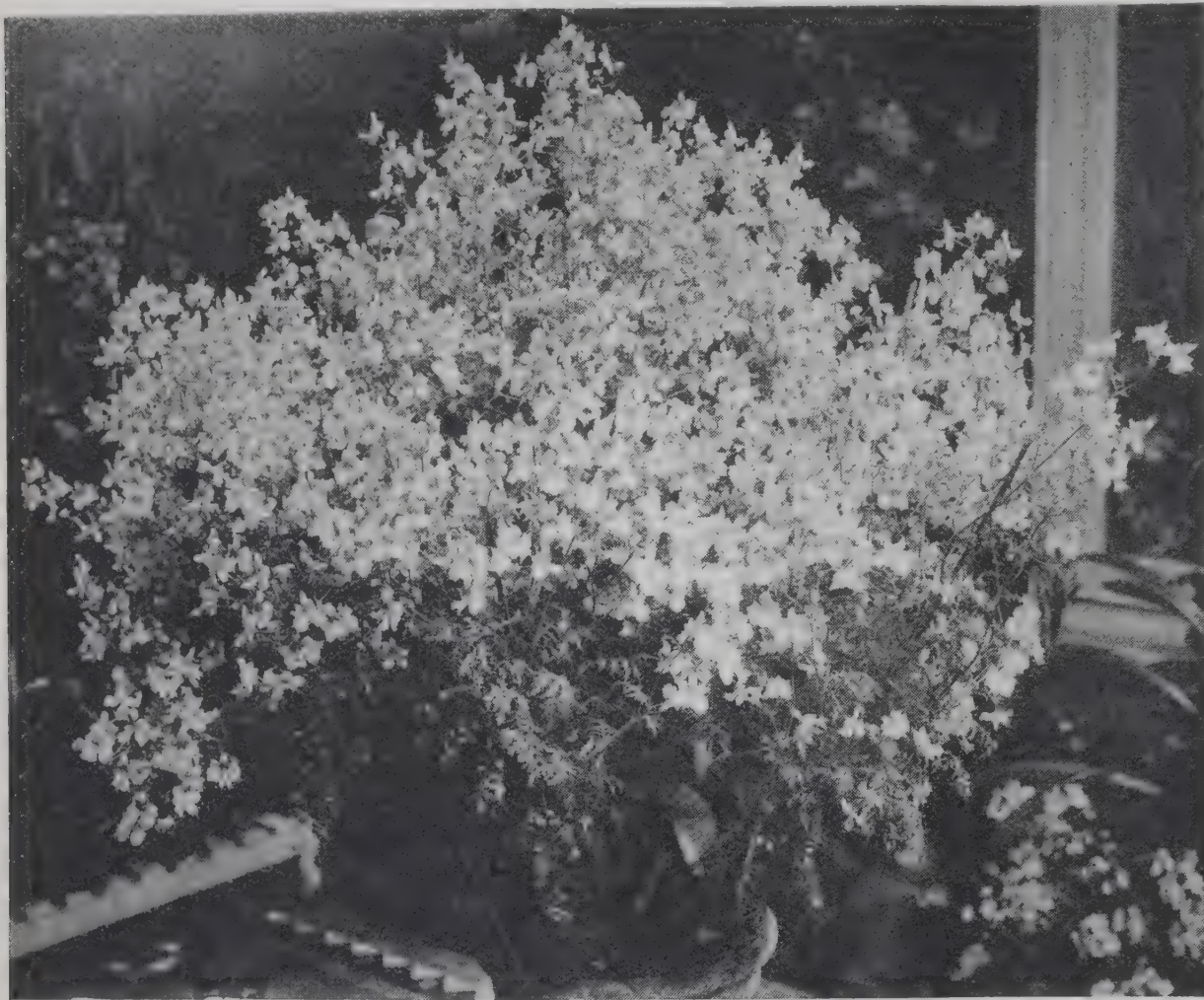
Gladiolus Chicago White.—A handsome white variety, with rosy markings in the throat.

Gladiolus Marie Therese.—A nearly pure white variety of handsome proportions, marked with rose on a straw-coloured blotch. The foregoing five varieties were exhibited by Messrs. Atkinson and Statter, Locksheath, near Southampton.

Gladiolus Abeliard.—A handsome spike of soft pink flowers, lightly striped a deeper shade of the same colour.

Gladiolus White Giant.—The spikes were of splendid proportions, the handsome, pure white flowers well meriting the description of "Giant." It is one of the finest we remember to have seen. These two were exhibited by Messrs. Kelway and Son, Langport, Somerset.

Each of these Gladioli received an award of merit from the National Gladiolus Society on the 28th ult.



A SCHIZANTHUS PLANT GROWN FROM SEED AS DESCRIBED ON THIS PAGE.

provide a welcome addition to the fruits of the holiday season.

E. A. BUNYARD.

SCHIZANTHUS AS A SPRING-FLOWERING PLANT.

THE value of Schizanthus as a spring-flowering plant cannot be over-estimated, and a good batch of this popular yet dainty and light flower is more appreciated at that season of the year than at any other time. Not only do the plants flower more profusely, but the absence of that scorching sun which is experienced later on in the year allows them to retain their beauty and freshness for a considerable period. A conservatory in which the main subjects are Primulas of sorts, herbaceous Calceolarias and Schizanthus wisetonensis is a sight to remember.

never hastening the plants in any way, and by the middle of October they may be potted into the final or flowering pots. These may be either 8 inches or 9 inches in diameter, according to the grower's discretion or convenience. The soil for this potting is very important, and should not contain too much humus and no artificial manure, unless it is a little bone-meal. Good strong loam should comprise three parts of the mixture, the other part consisting of wood-ashes, lime rubble and leaf-mould. Firmly press the soil around the plants as the work proceeds, and leave quite 3 inches for top-dressing if in a 9-inch pot, and a little less if in an 8-inch pot.

Stake the plants nicely, and if the weather is still open they may be left in the frame. I have known them to experience 5° or 6° of frost and take not the slightest harm. However, it is always the best plan when they have got so far on to take no chances; but never give them more heat than is absolutely necessary to be safe. As soon as they start growing again,

GARDENING FOR BEGINNERS.

HOW TO FORCE FREESIAS, HYACINTHS AND NARCISSI.

THE amateur cultivator, especially the beginner, derives a great deal of pleasure from the work of forcing bulbs in pots. Many bulbs are confined to a small space, and as every stage of growth is watched by the cultivator, the latter becomes deeply interested

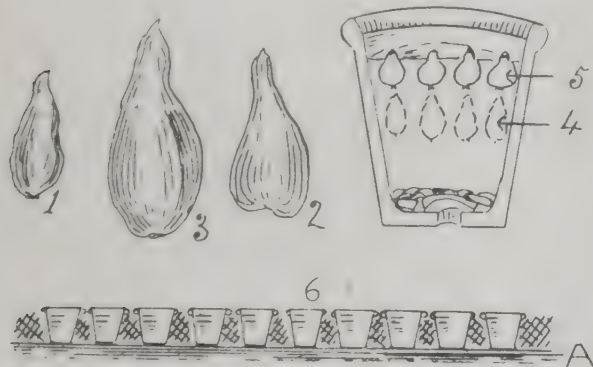


DIAGRAM SHOWING THE RIGHT AND WRONG METHODS OF POTTING FREESIAS.

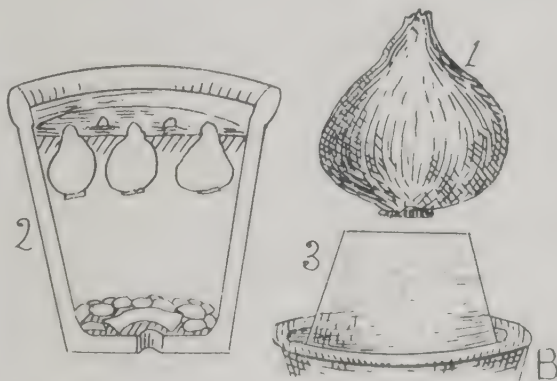
in the welfare of the plants and likes to learn how he can improve them from year to year. Now, all this is very interesting if the bulbs grown are good ones. If they are unripe, small, soft and do not contain an embryo flower-stem or only a very weakly one, then the efforts of the cultivator, however well they may be directed, will not be of much avail. The best bulbs are not always the largest; the finest are those which are very firm and thoroughly matured. When selecting the bulbs, therefore, the cultivator should be sure that they are heavy for their size and quite firm near the crown.

Composts for Pot Bulbs.—In every case a fairly light compost is the most suitable, and porosity of the soil is very essential to success. Old loam is better than new, so that the cultivator should give preference to the former. If there is only a small quantity of old loam available, then some old potting soil—that which has not been in pots long enough to become sour—should be mixed with the portion of new loam to be used. Leaf-soil is a valuable ingredient. It may be used at the rate of one-third of leaf-soil to two-thirds of loam, and sand sufficient to ensure the sound drainage of all soil placed in the pots. If manure is added, it must be well decayed and slightly dried in an open shed, then rubbed through an inch-mesh sieve. Artificial manures must not be added, as all necessary feeding can be done after the pots are taken from the plunging material.

Freesias.—There must be a careful grading of all Freesia bulbs before any are potted. If the small ones are potted indiscriminately with the large, then there will be fewer blooms in each pot, and the small bulbs will not improve much in size. No. 1 in Fig. A shows the smallest bulb. Such must be potted separately, as few of them will produce flower-stems. No. 2 bulbs must also be potted separately. A number of them will bear flowers, and these will be useful for cutting to place in vases. No. 3, the largest bulbs, should be potted separately. These will produce the finest flowers and look remarkably well in the

greenhouse or conservatory. In every case the bulbs should be put in about an inch apart, whether large or small or medium, and then all have freedom to grow and develop fully during the season. Having well drained the pots—which may vary in size from 3½ inches to 6½ inches—put in a small portion of rough compost, then some finer, and, having slightly firmed it, place the bulbs as shown at No. 4, burying them in the proportion depicted. It is wrong to pot them as shown at No. 5. When potted, give water freely through a fine-rosed watering can and plunge the pots in sand, old ashes or common soil as shown at No. 6, not covering the surface of the soil and the rims of the pots. They may be arranged in a dry place in the open air, or in a cold frame from which the glass lights must be removed in dry weather until the leaves appear through the soil.

Roman Hyacinths.—No. 1, Fig. B, shows a Roman Hyacinth bulb. Five good bulbs may be grown in a 6½-inch flower-pot and four in a 5-inch one. No. 2 shows the correct way to pot these bulbs. Having loosely filled the pot level with the rim with the prepared compost, scatter some sand on the surface and then press the bulbs down as shown in the sketch. Add any more compost as may be found necessary to



HOW TO POT ROMAN HYACINTHS FOR FORCING.

complete the potting. Another way is to three parts fill the pots with compost and make it firm; then put in the bulbs and surround them with soil, leaving, as shown, the crowns of the bulbs above the surface. Water the soil freely; then put empty inverted and smaller pots on as shown at No. 3. Cover all with old ashes or sand until the new growth is nearly two inches high.

Narcissi.—No. 1, Fig. C, shows a Narcissus bulb, and No. 2 the correct way to pot them. The new growth of well-buried bulbs is always stronger than that of those so buried as to leave the crowns above the soil; but if the bulbs are very large and many flowers are required in each pot, then, in order to get in more bulbs, the latter may be potted higher up at the widest part of the pot, so as to leave the crowns of the bulbs just visible. Water these bulbs, too, and then bury them under the ashes, as shown at No. 3, in any position outside if the base is well drained.

When New Growth Begins.—When the new shoots have commenced to grow freely, the pots

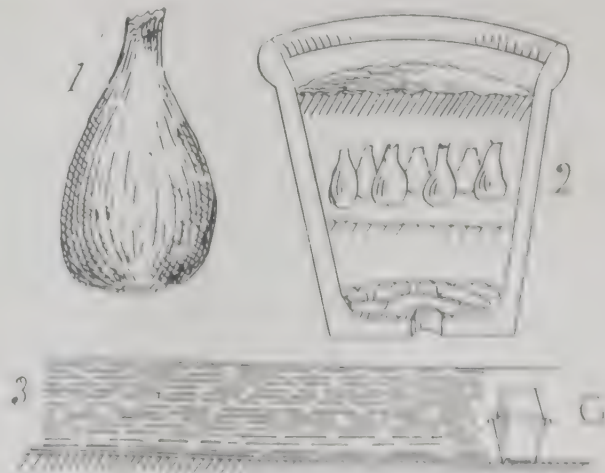
must be removed from the covering material and placed in a cold frame, there to remain for several weeks. The frame must be covered with mats for at least a week, and then full light should be gradually admitted. The same course must be adopted in regard to the ventilating of the frame; little at first, then abundance. From the frame the pots can be taken to the greenhouse or other structure in which a warmer temperature can be maintained, and flowers obtained to form a succession in due time.

G. G.

THE CULTIVATION OF ENDIVE.

VERY few cultivators grow fine plants of Endive. If matured where sown, the plants must be thinned early and freely, as overcrowded plants never give satisfaction. When transplanted, the Endive must be grown in rich but firm soil. If a succession of plants is required over a long period, the following treatment will prove helpful: At least two sowings should be made, one early in July and another early in August. The plants resulting from the latter sowing of seeds will be useful for lifting and replanting in a frame. If possible, avoid growing Endive on any ground recently occupied by Cabbages or Cauliflowers, as the latter crops impoverish the soil too much for the Endive to do well. Ground from which Peas, Beans or Turnips have been cleared will be quite suitable. Dig up such soil, put in a liberal quantity of well-rotted manure, break up all large lumps, and tread down the soil again while in a fairly dry state; then put out the young Endive plants 18 inches apart each way and water them. The plants spread considerably, and when fully grown will almost cover the whole space. Planted nearer than stated would cause inconvenience, as the workman could not get between the plants to attend to them. All early plants may be blanched by gathering up the outside leaves at midday, when every leaf is quite dry, and loosely tying them in the same way as Lettuces are tied. The later plants should be carefully lifted and replanted in October in a cold frame rather close together and in raised soil. The outside leaves will gradually decay. As they do so, remove them. Ventilate very freely in fine weather, and so guard against excessive moisture; then a nice supply of fresh and well-blanch hearts may be secured.

SHAMROCK.



THIS DIAGRAM ILLUSTRATES THE POTTING OF DAFFODIL BULBS FOR FORCING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Early Muscat Vines from which the crop has been gathered should receive careful attention with regard to insect life. If red spider or thrip is present on the foliage, some means must be adopted to rid the Vines of these destructive pests, or the prospect of a satisfactory crop next season will be much reduced. If the borders are well drained and the roots healthy, liberal supplies of clear, soft water should be given, and the foliage syringed daily with a view to keeping it quite free from insects.

Late Muscat Grapes will require moderate heat in the pipes at night to ensure a buoyant atmosphere, if the berries are to be quite ripe and well coloured by the end of September. While the berries are swelling, there must be no lack of moisture at the roots; and when water is necessary, a bright day should be chosen for applying it, so that the ventilators may be open during the day and partly so at night. Do not allow the growths to become overcrowded, but, at the same time, sufficient young shoots must be retained to keep the roots constantly active. A night temperature of 75° should be maintained.

Pot Strawberries.—The early batch of plants should be potted with as little delay as possible. The soil may consist of three parts turfy loam and the remainder of decayed manure, and this should be thoroughly mixed a few days previous to use. Make the soil firm about the roots, but do not break the small balls of soil in which the young plants have been growing.

Plants Under Glass.

Zonal Pelargoniums.—Plants for winter flowering should now be established in 6-inch or 7-inch pots, and must be grown in the open quarters fully exposed to the sun, and secured against rough wind. Keep the plants within bounds by pinching leading shoots as it becomes necessary. No great quantity of manure need be applied at present, but soot-water may be given about once weekly to keep the foliage in a healthy condition.

Crotons.—Well-coloured tops may still be inserted in the propagating frame with a view to raising young plants for decoration during the winter. These are very useful for small groups, for filling large vases, or for table decoration. When sufficiently rooted they may be potted into 4-inch pots and grown in an exposed position in the stove in order to increase their colour.

Pot Roses which are growing in the open must not be neglected, but should receive daily attention to watering and cleaning the pots. Give frequent applications of soot-water or liquid manure from the farmyard.

Humea elegans.—Young plants should now be potted into 4-inch pots and placed in a cold frame. Water carefully until they become established, and open the ventilators early each morning, but avoid draughts.

The Flower Garden.

Pansies.—The seedlings should now be ready for transplanting in a well-prepared border, and may afterwards be transferred to their flowering quarters. Keep the young plants well supplied with moisture at the roots, and stir the soil frequently with a Dutch hoe.

Belladonna Lilies growing under a south wall should be given a good soaking of clear water, and the soil lightly stirred with the point of a small fork. This will give vigour to the plants and enable them to push up their flower-spikes.

Hollyhocks.—To obtain the best results with these, the seeds should be sown now in pans of sandy soil and placed in a cool, shady pit until germination takes place. Prick out the young plants as soon as large enough to handle, and ultimately pot into 5-inch pots and grow as hardily as possible. By this means good strong plants should be available in the beginning of April.

The Rock Garden.

Taking Cuttings.—August is the best month for taking cuttings of Phlox, Dianthus and numerous plants for the rock garden. The best

method is to insert the cuttings in small pots or in pans of sandy soil, and place them in a close, cold frame facing north.

Shrubs Suitable for Rock Gardens which may be propagated during the autumn should include *Hypericum olympicum*, *H. patulum*, *H. Nummularium*, *Cistus* in variety (these require a warm, dry soil, with a certain amount of shelter), *Olearia stellulata*, *O. Haastii*, *Cotoneaster humifusa*, *Daphne Cneorum*, *D. blagayana*, *Genista tinctoria*, *G. anglica* and *G. sagittalis*.

The Kitchen Garden.

Cucumbers.—If winter Cucumbers are desired, there must be no delay in sowing the seeds, which should be placed in small, clean pots over a gentle hot-bed until germination takes place, after which the pots may be raised to within 1 foot of the roof glass, in order to keep them stocky. When they have made a leaf or two they may be potted into 5-inch pots, and should be ready for planting about the third week in August. Another sowing may be made a month later for fruiting in the new year, during the first three months of which Cucumbers are sometimes difficult to grow in consequence of dull weather.

Late Peas.—The latest batch of Peas should now be growing freely, and, if dry weather continues, they will require a good supply of water at the roots. A mulching of farmyard manure should also be applied.

Carrots.—It is not too late to make a sowing of stump-rooted Carrots for use during the winter, or for leaving in the ground until the spring. Young Carrots which are just showing through the surface should be thinned as soon as possible, the ground broken between the rows, and a light dusting of soot given.

Onions.—A sowing of Golden Rocca and Ailsa Craig should be made about the middle of August. The bed must be deeply dug, but no fresh manure applied. When the soil has become dry, the bed may be trodden evenly and raked level. The drills should be at least 15 inches apart. A dressing of soot may be given with advantage previous to digging the ground.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Cauliflowers.—There is usually a superabundant supply at this season, and it will be wise to go over the plot frequently and bend over a few leaves to protect the heads from the sun's rays. Later plants will be greatly benefited by a liberal application of liquid manure. Should this not be available, nitrate of soda will be a good substitute, an ounce to a gallon of water. Nitrate of soda is particularly distasteful to grubs.

Tomatoes.—A sowing may be made now to produce a crop of fruit in the winter, and as these plants have to pass through the dullest time of the year, they must be grown as sturdily as possible. Sow the seed thinly in pans, or, if only a few plants are grown, it would be as well to sow one or two seeds in small pots, leaving only the strongest seedlings. As soon as they have come through, place them on a shelf close to the roof glass, shifting them later into 6-inch pots.

Cucumbers.—To have a supply during the winter months, sow a few seeds in pots now, and make another sowing in about a month's time. Place them in the propagating-case, and if a suitable house is not ready for them, they will require to be potted on. Great care must be taken with this batch, as during cold autumn days mildew very often makes its appearance.

Lettuces.—A small sowing of some of the winter Lettuce can now be made, but only the hardiest sorts, such as Stanstead Park, should be grown. Make another sowing towards the end of the month, which in most cases ought to meet the demand.

The Flower Garden.

Bedding Geraniums.—A start must now be made to get a supply of cuttings for next year's requirements. As the season's display is by no means over, great care must be taken

not to disfigure the plants. Secure a number of each variety now, going over the plants again in about ten days' time, and if carefully done, these cuttings will scarcely be missed.

Heucheras.—Like the foregoing, these graceful perennials are easily increased by cuttings. As soon as the flowers are over, cut down the spike and secure a batch of cuttings, which will root readily in a cold frame. It is a good plan to plant out a number on a side border for cutting, as nothing is more graceful when arranged in vases. *H. brizoides* and *H. gracillima* are possibly the best varieties for this purpose.

Rock Garden.—As the season advances, this interesting part of the flower garden will require almost daily attention in the way of cutting off faded flowers and watering such as seem to be suffering. The cutting away of the faded flowers of Saxifrages gives them a new lease of life.

Plants Under Glass.

Lachenalias.—These useful greenhouse plants should now receive attention. Shake the corms from the old soil and pot them up in a mixture of loam, leaf-soil and sand. But perhaps the most effective way in which to grow them is in wire baskets suspended from the roof. For a time after potting keep the plants perfectly cool, and careful watering will be required until growth commences. No artificial feeding should be given until the flower-spikes appear.

Chrysanthemums.—As the pots are now becoming filled with roots, the plants must be regularly fed with one or other of the many manures now on the market. At the same time liquid manure from the farmyard and soot-water must not be despised. The taking of the bud of the single-stemmed varieties is a most important operation, and had better be left to the man in charge. In an ordinary way a start may be made now by taking them as they appear.

Marguerite Mrs. F. Sanders.—Cuttings of this useful greenhouse plant should now be secured for supplying flowering plants for the early summer. They will root best in a warm pit where they can be shaded for a time, after which they must be grown on in a cool, airy house. Pinch out the centres when they have made 4 inches or 5 inches of growth, to ensure a bushy habit.

Mignonette.—To have a batch of this fragrant plant in bloom in the winter and early spring, the seed must be sown without delay. To save disappointment it will be as well to sow three or four seeds in a small pot and retain the strongest seedling. Keep them in a cold frame well exposed to the light, and nip out the blooms as they appear until the plants are large enough.

Preparing Frames and Pits for Cuttings.—As the season is now at hand when a start must be made for securing cuttings that require protection, the pits and frames should be got ready for the various occupants. Very often cuttings are put into frames where the soil has possibly not been renewed for years. This is a great mistake, as it will well repay to renew the soil. Have the lights and glass thoroughly washed on both sides.

The Hardy Fruit Garden.

Raspberries.—Most of the fruit will now have been gathered, and, if time permits, have the old canes cut out at once, and leave only sufficient of the young ones to provide next year's supply. These had better be tied up loosely in the meantime to enable the canes to be thoroughly hardened. They would also be benefited by having the old mulching taken off and replaced with some fresh manure from the farmyard.

Plums.—These seem to be badly infested with aphides this season, and although there have been several heavy thunderstorms, they have failed to completely dislodge them. In such cases it will be well to have badly infested trees syringed with Quassia extract, and afterwards with clear water.

Cherries.—The fruit will now have been picked, at least of the sweet varieties, and the trees should receive attention. Lay in any shoots required for furnishing the wall, and if the soil is at all dry, give a good soaking of water to the roots. Perhaps Cherries suffer more from lack of moisture at the roots than almost any other wall tree.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

FRAGRANCE IN ROSES.

IN his interesting article on "Rose-growing in Town Gardens," page 329, issue June 27, Mr. Goddard challenges criticism when he writes that the pleasure derived from the sight of a beautiful Rose is "intellectual," while that given by the scent of a Rose is "purely sensual." Is memory purely sensual? Surely not. Surely it is memory that gives us our individuality, and few will deny that a waft of fragrance will recall the past more vividly than any vision can do. Smell, as Mr. E. F. Benson has well said, is the most "memoristic" of the senses; it certainly is the most emotional, and I should be sorry to think that intellect and emotion are necessarily antagonistic. Poetry has been described as intellect touched by emotion, and if I might borrow an idea from this phrase, I should say that a beautiful Rose without scent stands in the same relation to one with the added charm of fragrance that prose does to poetry. Like poetry, the fragrance of a flower may waken in us something that is far indeed from being purely sensual.

There is really no reason to depreciate one sense in favour of another; indeed, the senses are so closely allied that it is almost impossible to dissociate them from one another. If we see a lovely La France or Horace Vernet Rose, we unconsciously associate it with the delicious fragrance we know that it possesses; and so the mere sight of a flower we know to be fragrant gives us greater pleasure than the scentless perfection of a Baroness Rothschild or a Frau Karl Druschki can do. In saying this I do not suggest that we should never grow a Rose that is without scent. Some Roses—*Rosa sinica* Anemone, for instance—are so pleasing to the eye that we cannot forego the pleasure they give one of our senses merely because they do not gratify another; but I would plead for the inclusion in our gardens of such Roses as The Tuscan, Maiden's Blush and the old Damask, which, though lacking in size and form, are richly endowed with fragrance.

It is not necessary always to look back to past times for a sweet-scented Rose; many are still being produced. Evangeline, a single wichuraiana with the pink of the wild Rose, brought out in 1906, is delightfully fragrant, and in common with Grüss an Zabern, a snow white multiflora, has the power of scenting the air around it. In fact, the wichuraianas as a class are much more fragrant than were the old Ayrshires. They have got a bad name in this respect because two of the most popular, Dorothy Perkins and Hiawatha, are practically scentless; but François Juranville, coppery pink, and Paul Transon, a rampant grower, both have a most refreshing scent of Apples; the bright crimson Excelsa has also the fruity type of smell, and the large-flowered pale pink Gerbe Rose, besides having beautiful thornless green shoots and glorious foliage, is one of the sweetest of all Roses. The graceful pale pink Débutante and the new perpetual pure white Sylvia are well worth growing on account of their fragrance.

No doubt many of the lovely Hybrid Teas are not nearly so sweet as were the old summer Roses, such as Maiden's Blush and the Cabbage Rose, nor have they the deliciously refreshing fragrance of such Hybrid Perpetuals as Victor Hugo, Horace Vernet and many another veteran; but those rosarians who are on the look-out for fragrance, who also want the bright colour, pointed form

and perpetual habit of the Hybrid Teas, can find these qualities combined in Richmond, Liberty, André Gamon, Killarney and others, while Lady Alice Stanley and Grand Duc Adolphe de Luxembourg have the brilliant colouring and sweet scent, but not the pointed form.

One of the most beautiful of the new Roses in the Seedling Tent at the National Rose Society's Show on July 7 was Mrs. George Norwood. This variety is of a soft shade of pink, of fine form, with high pointed centre, and, to crown all, a quite remarkable fragrance. It was also shown among the new Roses competing at Holland House for the Clay Cup, to be given to the Rose possessing in the most marked degree the true old Rose scent, and was the only one in this class which combined lovely form and colour with exquisite fragrance. The successful Rose was Queen of Fragrance, a wide open, flat flower with a blush pink centre, brought out by Messrs. W. Paul and Son of Waltham Cross. The competition was an interesting one, though the specimens in the class when I saw them on the second day looked so tired and jaded that there was little to recommend them except their fragrance. The variety which apparently had the power of retaining this quality the longest was one of Messrs. Alexander Dickson's called Mrs. Bryce Allen. It had, as seen that day, dull pink flowers of the old-fashioned flat shape, but its scent was most delicious.

The judges of the new seedling Poses at the National Rose Society's Show were instructed to consider the fragrance as well as the form and colour of the Roses before them. This will doubtless encourage the hybridists to try to propagate from those varieties which are most sweetly scented, and so to retain the real old Rose smell as one of the principal features of the Queen of Flowers.

WHITE LADY.

[We suggest that the judges of new Roses for fragrance should be blindfolded. Perhaps "White Lady" will get some friend to test fragrance when blindfolded and note the interesting results. The same flower has been declared less or more fragrant when given to a blindfolded judge the second time! —Ed.]

WORK AMONG THE AURICULAS.

THE Auriculas will now begin their second season of growth, and if we are to secure a good truss of bloom next April we must encourage the plants in every way possible, for what is known as "a good autumn growth" is most essential. The subject of this series of articles ought not to be coddled in the least, and the treatment given now and during the autumn months will play an important part later on, especially when we come to the most critical months of November and December. Full exposure to the air should be the rule, excepting, of course, during heavy rain which is likely to make them very wet at the roots. Green fly must be kept down and all dead leaves should be removed, while the usual precaution ought to be taken in regard to the watering pot.

Offsets.—These are taken off twice a year, viz., in February and August. I always try to make a general examination of the plants during this month, and take off any of the offsets that are large enough for removal. If the variety is a fairly common one and no more stock is required,

they are thrown away or planted out in a small nursery bed, where they remain until they are fit to be removed to the rock garden or ordinary flower border. With a choice kind the reverse is the order; each offset is placed in a pot and carefully tended, so as to bring it to the flowering stage in the shortest possible time. Good varieties sometimes produce offsets very slowly, and this fact should be borne in mind when purchasing some of the best in the market. As a rule it takes an offset from eighteen months to two years to attain full size, while seedlings take about the same time. Some of the offsets that were potted up in February may require a move on, and where such is the case the present is a suitable time to carry it out, using the same kind of soil as advised in the article that appeared in May. Each plant should be examined, and if the surface soil has become hard or sour, it can be pricked up with a pointed stick. This not only gives them a much neater appearance, but is also of considerable benefit to the plants.

The Brown Grub.—Happily, this pest does not often make its appearance where the best loam and clean leaf-mould are employed as a rooting medium. It usually attacks the plants in early autumn, and, if any are looking sickly, this may be the cause, or perhaps the tap-root has begun to decay. The soil must be shaken from the roots and the stem exposed, when it can easily be ascertained what is doing the mischief. Before repotting in fresh soil, and in all probability a smaller receptacle, the stem must be cut back if decayed and the grub destroyed, or it will bore its way right through the centre of the plant. There is no need to repeat the details given in past months, but I strongly advise the grower to treat the Auricula as a plant, and by using ordinary common sense and striking what is popularly known as the happy medium in cultural matters, the results will be most satisfactory.

T. W. BRISCOE.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

IRIS (E. M. H.).—The Iris is *I. ochroleuca*, and is also known as *I. gigantea*. It is a proverbially shy-flowering plant, and, resenting much root disturbance, requires age before it flowers at all. It is occasionally seen under the most opposite conditions of dry and wet, sun and shade, and behaving much alike in all. Some of the finest examples we have seen, however, were in light, rich loam in full sun. The plants reached 6 feet high and flowered splendidly, after which for three years they took a rest and gave but few flowers. All you can do is to encourage good growth by early summer watering and a free use of liquid manure or guano-water. It is a plant for experiment, and one for which it is difficult to lay down hard-and-fast rules.

ROSES WITH BAD CENTRES (Reigate).—There are very many crippled flowers this season, owing, we believe, to the late frosts and altogether bad weather in many parts. It is unwise in such a season to be in a hurry as to disbudding, as we are apt to retain the central bud, which is too often damaged. As you gave the Roses the various ingredients you name in the winter and early spring, you have somewhat overdone it in giving the other

articles alternately once a week. Had you kept the cow-manure in liquid form, you would probably have had better quality blooms. A dozen good reliable exhibition Roses, avoiding white and cream, are Gloire de Chedane Guinoisseau, Avoca, Margaret, Lady Ashtown, Mrs. Wallace Rowe, Hugh Dickson, Marquise Litta, Mrs. Walter Easlea, Lohengrin, Lady Ursula, Exquisite and Ulrich Brunner.

BEGONIA FLOWERS DROPPING (H. E.).—It is difficult to assign any reason for the flowers of your Begonias dropping in the way described. The plants may have suffered from drought, a likely cause of the trouble, for hot, dry weather such as we have experienced this summer is not to the liking of tuberous Begonias. For this reason, and in order to ensure a regular condition of moisture, many cultivators mulch the beds of these Begonias with Coconut refuse or leaf-mould.

DIVIDING PRIMULAS (Wills).—The Primulas may be divided at any time after flowering, and the present is suitable, provided you can give them the requisite attention in watering and shading for a week or two following the operation. Both *P. rosea* and *P. japonica* revel in moisture-laden soils naturally, and, in addition to abundant root moisture, should be afforded free sprinklings overhead for some days after dividing the plants. *P. frondosa* also delights in moisture, though in a lesser degree. All three may be raised from seeds, and that is the better way of ensuring great vigour in the plants. Tiffany, scrim or thin canvas of varying qualities and prices are usually stocked by nurserymen and seedsmen, and your better plan would be to send a request to some of these for samples, or for their catalogues, which as a rule contain them.

PLANTS FOR FLAGGED WALKS (Spade).—The really suitable plants for this purpose are not numerous, and those available from seeds, or that soon make their presence felt, less so. In a very considerable number of instances we find tufted and cushion mounded subjects, over which it is not possible to step in the usual way, and others flowering at 1 foot or 15 inches high, all too freely employed, with the result that the "path" is in the nature of a "flat rockery." Some of the dwarfest and most suitable are given below, those available from seeds being marked by an asterisk: *Arénaria balearica*, *Campanula muralis*, *C. pusilla*, *C. p. alba*, *C. pulla*, *C. garganica* (three varieties), **Dianthus squarrosus*, **D. cæsius*, **Draba aizoides*, *Erinus alpinus* in all its forms, *Helxine Solierolii*, *Leptinella scariosa*, **Linaria pilosa*, *Mentha Requienii*, *Myosotis rupicola*, *Sedum brevifolium*, *S. corsicum*, *S. hispanicum glaucum*, and *Thymus Serpyllum coccineum*. At the sides of the walks, where little or no treading is likely, *Corydalis lutea*, the dwarfest of the Mossy and other Saxifrages, and alpine *Dianthus* might also appear. Much, naturally, depends upon circumstances.

PLANT FOR BEDDING (S. W.).—If you are contemplating a bedding plant that could be grown in reserve and transplanted into the intended position, we are afraid we do not recall anything likely to be of service. The Sweet William would not be in flower till late June or early July, and, moreover, does not transplant well in the advanced stages of growth, when flowering-time is approaching. You might, of course, plant with spring bedding subjects in the autumn the Persian *Ranunculi* in variety, which would afford a useful succession, flowering in your district in June, or in December or January the St. Brigid *Anemones*, which would flower in May and June. These only need dibbling 2 inches deep into the soil, or, by growing the plants in pots, they might be introduced without disturbance when convenient. Or you might effect a sort of compromise by planting, 8 inches or so deep, Emperor, Sir Watkin or other *Daffodils* permanently, and, as surface carpeters, Tufted Pansies of shades distinct from the *Violas*. By planting the *Daffodils* in September and the *Violas* (Tufted Pansies) in October, the beds would be covered during the winter and a good flowering ensured throughout April, May and June. Then, by starting the Begonias early in boxes, giving them plenty of room, these, with the surface cleared of *Violas*, could be put out practically in bloom. The above are merely suggestions, and are made without knowledge of what bedding plants you employ. If you gave us the names of these and the size of the beds, we might further assist you.

PRUNING ANCHUSA (Dion).—The main shoots of *Anchusa italica* are shortened to dwarfen the plant previous to the expansion of any flowers, the effect of which is that the axillary growths below the parts excised, many of which would otherwise never shoot, are forced into vigorous growth, but more in a horizontal than in a vertical direction. The more forward of these, as they exhibit signs of seeding, are also cut back to a new set of growths which issue lower down the stems of these, and so on as long as the vegetative powers of the plant are in such vigour as to induce the production of successive axillary growths. The limit is reached according to the cultural treatment of the soil, which, if of the best, will continue to the end of the season. It may be of interest to note that there is a comparatively large section of herbaceous plants which can be rendered considerably dwarfier than they naturally are under high-class cultivation by adopting the above expedient. The uncommon but not useless *Gypsophila Rokejeldii* is one such which, left to itself, grows out of all proportion to be of benefit in an ordinary herbaceous border. It can be kept quite low by repeated pinching. The varieties of *Anthemis tinctoria* afford an example of what may be effected to produce a variety just by simple manipulation of the plants. Plants left to themselves will grow to 7 feet or 8 feet in height, and on occasion are useful then. By cutting at the proper stage, plants not exceeding 3 feet in height are possible; or by planting wide and pegging down the shoots the same end is attained. Some of the

varieties of *Chrysanthemum maximum* grow much too tall to be generally useful, but instead of cutting these we prefer to replant annually, the spring planted being much dwarfier than those planted in the autumn. To revert to the question of pegging, *Linaria Panceicii* when pegged down forms a low mass of lovely colour. *Aster acris* is perhaps as distinctive pegged as treated in any other way. *A. Climax* is another well-known variety that repays growing in this way, and autumn-flowering *Chrysanthemums*, if pegged at an early stage of growth, also produce striking masses of bloom. But really there is a large number of plants that may readily be made to assume different and distinctive habits of growth by these means. Let us note in conclusion that those plants which become hard in the stem should be cut back previous to that stage.

THE GREENHOUSE.

FUCHSIA WITH ABNORMAL FLOWERS (G. P.).—It is impossible to state the reason of your Fuchsia producing such depauperated blooms, though such freaks of Nature are occasionally met with. We have known it occur in several Fuchsias, but never before in the variety Gertrude Pearson. How best to restore the plant to its normal condition is a somewhat difficult problem, and unless particular interest is attached to it we should be inclined to burn it. Should you, however, desire to give it another chance to mend its ways, we advise you to pick off all flowers and buds and repot, at the same time taking away as much of the old soil as can be done without unduly distressing the roots. Potted in a mixture of loam, leaf-mould and sand, it will soon become established and commence to grow and flower, when the blossoms may revert to the normal type. On this point, however, there is some doubt, though the experiment may be well worth trying. We much appreciate your kind remarks re THE GARDEN, as our aim is to render it of value for all classes of gardeners.

MISCELLANEOUS.

MILLIPEDES ATTACKING MALVAS (Ragatt).—The pest attacking the Malvas and Clarkias appears to be the flattened millipede, *Polydesmus amplanatus*. These are usually most abundant when the soil is sour, and may be captured by burying pieces of Potato, with a stick piercing them to mark the sites of the traps, examining them each day and killing the captives.

SILVER-LEAF DISEASE (Kent).—There is no fear of the silver-leaf disease spreading from one tree to another while the affected parts are alive. The fungus which causes it fruits on the dead stems, and it is from these that the evil spreads. All affected stems should, therefore, be burned. Stone fruits are most affected, but almost any kind of tree is liable to fall a victim. We have not met with it on Currants or Raspberries.

WASHING VEGETABLES FOR EXHIBITION (G. H. H.).—All vegetables are best washed just before they are staged in the show tent or building. They must be washed just long enough to allow them time to dry before being packed for conveyance to the show. If the latter is close to the gardens where the vegetables are grown and special packing is not necessary, then wash the roots on the morning of the show, as they dry very quickly. If they are to be packed, wash Potatoes and roots, dry them, and then wrap each one in clean white paper. A brush should never be used in preparing vegetables for exhibition. Soak the specimens in water and then sponge them. A syringing is beneficial, especially in the case of Celery and Leeks.

NAMES OF PLANTS.—J. P., Scalby.—Hybrid Tea Rose *Princesse de Bearn*. The other plant is *Swainsona canescens*.—**H. A. D.**—The Rose is *Pharisæer*. Many thanks for your kind remarks.—**J. C. A.**—Rose *Mme. Bérard*.—**L. Johnston.**—*Hyoscyamus niger* (Henbane).—**F. T. Coates.**—White, Carnation *Mrs. Eric Hambro*; buff, *Viscountess Ebrington*.—**F. B. M.**—1, *Betula lutea*; 2, *B. lenta*.

* * * Owing to the Bank Holiday, this issue had to go to press several days earlier than usual, and consequently many names of plants are held over until our next issue.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

At the fortnightly meeting held at Vincent Square on Tuesday, the 28th ult., there was a good display of flowers and fruit, but visitors were far from plentiful. Thanks to the efforts of the National Gladiolus Society, a great many non-competitive groups of these beautiful bulbous flowers were staged, the most interesting of all being the beautiful *primulinus* hybrids.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), Sir Harry Veitch, and Messrs. James O'Brien, W. Bolton, A. McBean, T. Armstrong, J. E. Shill, W. H. Hatcher, Arthur Dye, E. H. Davidson, Gurney Wilson, Charles H. Curtis, S. W. Flory and Richard Thwaites.

Messrs. Charlesworth and Co., Hayward's Heath, showed very good examples of *Odontoglossum Rolfeae*, *Catasetum macrocarpum aureum*, *Cattleya Rex*, *Lælio-Cattleya colmaniana*, together with a variety of *Cypripediums* and *Cattleya Fauna*, whose buff-coloured, purple-lipped flowers were very beautiful.

From His Grace the Duke of Marlborough, Blenheim Palace, Woodstock, came the fine *Vanda cærulea Graci*, a very beautiful pale blue form. Silver Flora medal.

Messrs. Sander and Sons, St. Albans, had nice flowering specimens of *Masdevallia Carderi*, *Anguloa Cliftonii*, together with *Cypripedium Franconia superbum*, *Lælio-Cattleya Hiawatha* and *Epidendrum radiatum* among many things.

Mr. J. Gurney Fowler, Pembury, Kent, received awards of merit for *Lælio-Cattleya Miss Louisa Fowler* and *Cattleya hardyana rubens*, both choice and good. Silver Flora medal.

Baron Bruno Schröder, Englefield Green, had the fine white *Cattleya Astron*, an exquisitely beautiful plant. See "New and Rare Plants."

Mr. H. Goodson, Putney, showed *Oncidium Leopoldii* Fairlawn variety, the plant carrying a long raceme of flowers.

Mr. R. G. Thwaites, Chessington, Streatham Hill, had nice examples of *Odontioda Thwaitesii* (with a spray of rich purple flowers), *Odontoglossum Pescatorei* and others.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. W. Bates, Edwin Beckett, A. Grubb, J. Willard, J. Davis, A. W. Metcalfe, J. Jaques, A. Bullock, G. Wythes, P. C. M. Veitch, John Harrison, C. G. A. Nix, A. R. Allan and George Kelf.

A magnificent collection of pot-grown fruit trees, comprising Apples, Pears, Plums, Peaches and Nectarines of the highest excellence, was staged by Messrs. James Veitch and Sons, Limited, Chelsea. The group was arranged on the floor opposite the entrance, and was probably the finest ever staged by this eminent firm. In not a few instances the trees were simply loaded with fruits, at once a demonstration of high cultural skill and a tribute to British horticulture. In all there were about six dozen trees staged, the majority of pyramidal outline; the others—Peaches, Nectarines and their like—in fan-trained examples, reaching to 8 feet or more across. Of the Plums there were a dozen examples of Jefferson's, four of Kirke's, seven of Early Transparent Gage, literally loaded with fruits; while such as Green Gage, Red Mirabelle and Oullin's Golden Gage were all represented. Of Pears there were some half-dozen sorts, Durondeau, Williams' Bon Chrétien, Souvenir du Congrès and Louise Bonne of Jersey being some of them. Apples Wealthy, Lady Sudeley and James Grieve, the second named brilliantly coloured, were also noted. Of Peaches there were six trees of Peregrine, two of Violette Hative and one of Duke of York; while the Nectarines found admirable representation in fine examples of Early Rivers, with others of Pineapple, Lord Napier, and Pitmaston Orange. Hence it will be seen that the collection was both good and varied, a fine demonstration of what is possible with the cultural skill which now prevails. A gold Hogg Memorial medal was deservedly awarded.

Messrs. S. Spooner and Sons, Hounslow, showed Apples Red Astrachan, White Transparent, Mr. Gladstone, Early White Magnet and Early Victoria. Pear Citron des Carmes was also shown.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. C. T. Drury, E. A. Bowles, R. C. Notcutt, James Hudson, F. W. Harvey, J. Green, T. Stevenson, J. W. Moorman, J. F. McLeod, W. Howe, A. Turner, C. Dixon, J. T. Bennett-Poß, C. E. Shea, C. E. Pearson, W. P. Thomson, W. G. Baker and E. H. Jenkins.

From Messrs. James Kelway and Son, Langport, Somerset, came a fine table of *Gladioli*, the quality of the exhibits finer than we have seen for a long time. Obviously the weather conditions experienced this year have proved congenial to these plants, both the flowers and the spikes being excellent. The group was composed chiefly of *gandavensis* hybrids, with a few others into which *primulinus* influence had freely entered. Some good sorts were John Churchill Craigie (yellow and scarlet), Sir M. W. Ridley (crimson), Countess of Suffolk (crimson, pink and yellow), General Henderson (flamed scarlet and crimson), Yellow Prince, Golden Measure, Golden King (rich yellow with crimson base), Lady Rosemary Portal (ivory white) and Mrs. G. W. Willock (pink and white). Golden Girl and Banshee are *primulinus* hybrids, very beautiful in yellow and bronze pink.

Mr. L. R. Russell, Richmond, showed a collection of *Celosia pyramidalis* in three shades of red and tall and dwarf yellow. A full table was occupied by the admirably grown examples. Silver Banksian medal.

Mr. C. Engelmann, Saffron Walden, was the only exhibitor of *Carnations*, showing in admirable form such as Elektra (orange), Carola, Scarlet Carola, White Wonder and Circe (heliotrope, fancy). Silver Banksian medal.

Messrs. Atkinson and Statter, Southampton, showed two semi-circular, tastefully arranged groups of *Gladioli* on raised stepped staging. The arrangement was artistic in the extreme, and, moreover, displayed this fine garden flower to considerable advantage. The ground colour of the arrangement was grey, the light sprays of *Gypsophila* associated therewith harmonising beautifully. Some of the leading sorts were Golden King, a centre of this, some fifteen spikes in all, making a glorious display. The variety has deep primrose yellow flowers with crimson base. Blotch is scarlet and white, a fine contrast; Orby, crimson scarlet; Goldfinder, yellow; and Loveliness, flesh white to pink with yellow shading, a magnificent variety. Excelsa (pink), Pink Beauty (with crimson blotch), and Armagnac (crimson, white throat) were others noted in a fine lot.

Mr. Howard H. Crane, Highgate, N., had a very fine collection of *Violas* and *Violettas*, showing them in his usual style in pans of sand and water. Of the latter, Claribel (pale blue), Forget-me-not, Rock Orange, Cynthia (mauve), Rock Lemon, Violetta (white) and Neapolitan were all good and choice. Bronze Banksian medal.

THE GARDEN.

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AUGUST 15, 1914.

NOTES OF THE WEEK.

Flower Shows Cancelled.—Owing to the present crisis, a number of flower shows have been abandoned, including the fortnightly meeting of the Royal Horticultural Society (arranged for August 11). We also understand that the flower shows at Shrewsbury, Carlisle and Taunton have been cancelled.

The Cultivation of Vacant Land.—The Development Commissioners desire to suggest to landowners in England and Wales that they should at once forward to the Agricultural College for their province particulars of any waste land which they are willing to place at the disposal of suitable authorities for improvement by such means as reclamation or afforestation. The particulars of the land should include situation, approximate area, elevation, character of the soil and the terms on which the land can be obtained by an authority willing to improve it.

Early Celery.—Attend to the earthing up of the earliest planting; but on shallow soils brown paper collars would serve the purpose just as well. If, however, the latter are used, the plants must have abundant supplies of water at the roots. Paper collars, of course, should only be used for the earliest crop.

The Madonna Lily.—It is generally admitted that to succeed in the cultivation of the stately Madonna Lily it should be left undisturbed as long as possible. For this reason it is often seen at its best in cottage gardens, where for year after year it remains in the same place, almost without attention. Transplanting is sometimes a necessary evil, and in such instances it should be accomplished towards the end of August, planting in a full sunny position, 4 inches to 5 inches deep, in good soil to which lime has been added.

Pruning Climbing Roses.—When the plants have ceased blooming, many of the old shoots may be cut away to make room for the young growths to be trained in their places, and nothing should be tied into position beyond that which is necessary to furnish the trellis for another year, as, by crowding the shoots now, many of them never become ripened, and the result is almost sure to be unsatisfactory. There are many charming varieties to choose from, which may be trained in different ways or allowed to ramble at will over an old wall or up a decaying tree stump, where they present a very pretty appearance.

In such seasons as this a liberal supply of water should be given at the roots.

Labour Exchanges and Harvest.—The Board of Trade Central Office for Labour Exchanges are making special arrangements for the supply of farm hands, &c., required in connection with the harvesting season. All farmers and other employers who are desirous of engaging this class

afterwards met the whole of their employes at the regular morning prayers, when it was announced by the senior partner that the welfare of the wives and families of those called on to serve their country would, during their absence, be cared for by the firm, and the places of all would be kept open. "God Save the King" was heartily sung.

A Handsome Biennial.—*Gilia coronopifolia*, a plant that has come to the front a good deal of recent years, should be in all gardens. It is a very handsome biennial, bearing large spikes of brilliant salmon-scarlet flowers, a colour so valuable in gardens. It forms pretty, compact tufts of elegant Larkspur-like foliage, and during its second year a strong shoot commences to grow from the centre, which about August attains a height of from 2½ feet to 3½ feet. The flowers are most gracefully arranged on the main flower-stalk and last in bloom for a very long period, frequently commencing to open in July and continuing into October. It is readily raised from seeds, and at the present time is one of the most brilliant plants in our garden. Seeds of the white Swan River Daisy (*Brachycome iberidifolia* White Star) were sown among the plants when they were put out in the spring, and the two are now in bloom together, forming a mass of beauty.

Preserving Vegetables and Fruit.

At a period such as this, when we are in the throes of a European war, it is the duty of everyone to be as economical as possible with all kinds of food. Fortunately, our vegetable crops this year are good, and in some places fruit also can be had cheaply. With a view to assisting our readers in preserving these two important kinds of food, we hope next week to publish articles on the storing of vegetables

for winter use and the bottling of such fruits as are still obtainable. As the Rev. W. Wilks and Professor Keeble point out, it is not too late to sow Turnips and Carrots, which, given a favourable season, will yield crops of succulent roots for use in winter. Plants of such greens as Sprouting Broccoli, Russian Kale and Savoy Cabbages, where obtainable, should also be planted, and more closely than they would be earlier in the year.



A GROUP OF MADONNA LILIES LEFT UNDISTURBED FOR MANY YEARS

of labour should communicate their wants to the manager of the nearest Labour Exchange, the address of which can be obtained from the local post office. It should be remembered that no fees are charged, either to employers or employes.

Seedsmen for the War.—At the Royal Seed Establishment on the morning of the 5th inst., Messrs Sutton of Reading took a personal farewell of the Reservists and Territorials among their staff, and

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Recipe for Lavender Water Wanted.—Would any of your readers give a recipe for home-made Lavender water or Lavender essence? as I should much like to know if it is possible to make at home, and what utensils would be required for doing so.—M. H. A.

Annuals for the Rock Garden.—On page 387, issue August 1, you draw attention to two of the lesser-known annuals suitable for a rock garden. May I supplement them with three other sorts, perhaps not so rare, but really good things, though seldom, when compared with the mention of other annuals, spoken of. They are *Eschscholtzia tenuifolia*, *Leptosiphon hybridus* and *Sedum cæruleum*, all of which are flowering now, and, coupled with being so dwarf and neat, may claim to be veritable gems for any rockery or wall. The flowers of the first named are primrose coloured, which are well set off by the finely-cut, greyish-hued foliage out of which the spikes spring up. *Sedum cæruleum* tells its own colour, and I will only add that it blooms most freely where root action is limited, in which position also the foliage assumes a more bronzed appearance than where a deep soil abounds. The *Leptosiphons* are variously coloured and range in height from 3 inches to 6 inches, as I do not here include the variety *densiflorus*, which is a foot high or more. Three inches to 6 inches also covers the height of the *Sedum* and *Eschscholtzia* referred to.—C. T., *Highgate*.

Japanese Irises in a Cheshire Garden.—I send you a photograph of Japanese Irises growing at the edge of my pool. Some are growing in the water, the greater part of them, and some on the bank. The chief enemies of the Iris are the water-rats, and I have to protect the plants with wire, as shown in the photograph. The Irises have done exceptionally well this year, due most likely to the mild winter and hot spring and summer, each clump having a dozen or more spikes of flowers, which are of every shade and variety.—GEORGE DIXON, *Astle Hall, Chelford, Cheshire*.

Gypsophila paniculata flore pleno.—The doubling process has an unfortunate tendency in certain varieties of plants to detract from, rather than improve, the appearance of the blooms; but in the case of the subject under notice the alteration is a distinct improvement, which, while retaining the cloud-like characteristic and free-flowering propensity of the old variety, has made it quite a different-looking plant. Whereas the single form appears greyish white, soon turning to dirty white when cut, the variety under notice bears snow white masses of perfectly double blooms. Most useful in conjunction with any other flowers for decorative effect, either in vases or epergnes, it is well worth a place in the herbaceous border. When dried, the flowers retain their whiteness throughout the winter; hence the variety possesses the additional advantage of being practically an everlasting. Vases of last

season's gathering are before me as I write, waiting to be replaced by the current year's flowers now just coming into bloom. One tie all round the plant in the early stages of its growth will be found sufficient to keep the thread-like stems erect throughout the season. *Gypsophilas* like dry soil impregnated with mortar rubble or limestone matter.—B. W. LEWIS.

The Shrubby Candytufts.—These are capital dwarf evergreen shrubs for growing in the rockery, where they soon form fair-sized clumps of dark green foliage and invariably flower with great freedom. A good-sized group of these hanging over the face of a steep declivity looks when in full bloom like a drift of snow, so pure is the whiteness of their blossoms. There are quite a number of varieties, all of them worth growing; but I wish to call attention to two especially handsome sorts, which should be in every garden, no matter how small. The first is *Little Gem*,



JAPANESE IRISES BY THE WATER-SIDE IN A READER'S GARDEN.

a neat, compact-growing little shrub, forming a beautiful cushion of emerald green, a highly attractive feature at any period of the year; but in spring, when it expands its snowy blossoms, the cushion is changed from green to one of purest white. The other variety is *Snowflake*, a much stronger grower, and therefore suitable for planting in larger spaces where it will have plenty of room to expand. The flowers of this are produced in great profusion, every shoot carrying a large truss of snow white flowers, which last a long time in good condition. The Iberises are easily increased by cuttings taken in the late summer or autumn and rooted in a cold frame.—W. L., *South Ayrshire*.

Ourisia coccinea and Its Cultivation.—There are few plants which are so much admired as *Ourisia coccinea*, yet are so disappointing to the average cultivator, especially to those who

try to supply it with its apparent requirements. The writer knows of many people who have tried and failed with this Chilean subject, whose bright scarlet trumpets are so beautiful. On the other hand, it is a mystery to see it doing well in some garden where, though the conditions are such as are suitable for good border flowers, there seems no reason why *O. coccinea* should do well there and fail in other places where its supposed needs are more attended to. It is strangely fastidious, and while no one need ever despair of succeeding with it, nobody can feel absolutely confident of success. The writer knows of one garden where it thrived amazingly in one place, but pieces removed to another and apparently similar position in the same garden sulked and died off. On the other hand, one finds *O. coccinea* flourishing in some places in moist peat; in others in loam, sand and leaf-mould; and in still others in ordinary loam in a mixed border. If there is any reliable treatment, nobody appears to have hit upon it yet, and the longer one knows the plant and sees it growing or failing to grow, the more does one feel the limitations of human knowledge and the more diffident of giving advice with regard to flowers such as this. These thoughts are induced by seeing this plant flourishing in several Berwickshire gardens, such as that of Mr. Hay at Duns Castle, Duns, where it appears to give no trouble in the border among other hardy flowers, and makes generous clumps.—S. A.

Laurel Leaves as an Insecticide.

It may interest some readers to know that the leaves of the ordinary Laurel can be used as an insecticide in a small way. These leaves contain a chemical substance known as a glucoside. When they are broken up, bruised, or have the tissues torn asunder, fermentation takes place immediately afterwards and the glucoside is decomposed, while the deadly hydrocyanic acid gas is evolved at the same time. The gas spells death to all insects, and so the leaves may quite usefully be employed for fumigating small places or single plants. I have often used these leaves to treat some individual plant in the greenhouse, and for the purpose I keep a tall box rendered fairly air-tight by means of putty; this I cover over with glass. A good

handful of the leaves are gathered as required, and bruised thoroughly by being beaten with a wooden mallet on a block or brick. This brick, with the leaves on it, is placed inside the box along with the plant, the top covered up and left so from sunset until early the next morning. No damage has ever been done to the plants, and the result is always satisfactory. I have fumigated plants under a bell-glass in this way successfully, and have tried it in a frame and in a propagator with varying success, failures being accounted for by imperfect closing of the sash. Naturally, this method of fumigation has its limitations, and is often carried out because of its uniqueness rather than for its practical utility; but it may recommend itself for single plants suddenly infested with insects in destructive numbers.—H. H. A.



TWO BEAUTIFUL LILACS:

White: Marie Legraye.

Purple: Souvenir de Louis Spathe.

White Rose Ointment.—Will it interest any of your readers to know that the pipkin as spoken of by "Anne Amateur" in various numbers of THE GARDEN and illustrated in August 1 issue can still be obtained, and very cheaply and in various sizes, at Mead's Pottery, Burgess Hill, Sussex? Made with flat bottoms, the pipkins are useful for stewing fruit or making porridge, and in our house they have been so used for many years.—GRACE GARDINER.

Erodium corsicum.—This delightful alpine gives much promise of geniality and freedom of growth and flowering; hence will be welcomed by all who find pleasure in the dwarf carpeting subjects, whose rightful place is the rock garden. Happily, too, it is a free seeder, so that there is no need for a solitary 3-inch-wide example to represent—or misrepresent—a plant that should appear in yard-wide patches. The warmth of its rosy red flowers, too, is very welcome, and against the spreading carpets of hoary crenated leaves is pretty indeed. In short, it is a dainty as well as meritorious plant, whose profuse flowering but adds to its many good attributes. For a sunny sloping position in the rock garden it appears particularly well suited.—S.

Rose Trier.—There are certain varieties of decorative Roses only occasionally seen at the shows which many gardeners with none too much room to spare for experimental purposes are shy of trying except under strong personal recommendation by those who have grown and proved them. Among such a class as this may be included the splendid Polyantha variety Trier. A semi-double, most floriferous Rose, in colour creamy white with pink-tinted centre petals, it is suitable for covering an arch or pergola, or it makes a grand pillar. The flowers, which are borne in pyramidal clusters on the points of the lateral shoots, have a gentle perfume, very noticeable in the evening. In addition to its very pleasing bloom, a specific charm about this variety is its profusion of handsome dark green foliage, carrying a distinct gloss. This foliage is of the everlasting type; hence the plant remains a thing of beauty the whole year round. Altogether it is a Rose highly to be recommended—a Rose possessing practically no faults and very many virtues.—B. W. LEWIS.

The Feather or Plume Hyacinth.—Mauves and lavenders are now such popular colours that I wonder we do not hear more of the Feather Hyacinth (*Muscari plumosum*). I believe it is quite hardy in the warmer parts of Great Britain in a light soil; but it has never yet been my good fortune to see it flourishing out of doors. I have, however, grown it for a number of years in pots, which are wintered in a cold frame, and then, at the commencement of March and onwards, I bring them, in batches, into gentle heat. Then the curious, dead-looking arrangement that we see at the bottom of the leaves first slowly rises upon a thin, wiry stalk, and afterwards, when this has reached a height of 8 inches or so, begins to expand in a curious, weird way, giving but little indication for a day or two of the dainty plume-like-looking head which it will have when fully expanded. It looks extremely well arranged with Maidenhair Fern or Asparagus Sprengeri, and lasts a very long time in a fresh condition. Botanically, it is not a flower or a flower-head of any kind. The head is really a collection of thin, slender branches borne on others a little thicker than themselves, and these, in their turn, borne on the wiry central stem. Morphologically, they may be some part or parts of a flower, but they do not look like it.

I once asked a gardener how his Feather Hyacinths were getting on. He said, "They all went wrong; the flower-spike never seemed to develop, and it looked half dead. So I threw them away." He did not know their slow—very slow—ways or the curious, withered, half-dead look that they affect. Anyone who wants to grow a cheap novelty in pots next year should try a hundred of these. Not only are they nice for cutting, but I find them very useful in pots for places in the sitting-rooms or hall, where small pots are wanted. Five in a 5-inch pot—or, if the bulbs are very strong, only four—make a good show. Cost of bulbs, 2½d. or 3d. !—JOSEPH JACOB.

The Pyracantha as a Flowering Shrub.—When the blooms of our own native Hawthorn are over or nearly so, the Pyracantha unfolds its masses of white blossoms. Though in this stage it is certainly less showy than in the autumn, when laden with its brilliant scarlet berries, yet in spring or early summer its beauty is such as to claim due recognition. That the Pyracantha with its two attractive phases forms a very desirable shrub in the open ground is not recognised to the extent it might be. Unfortunately, under such conditions the birds are, as a rule, even more destructive to the berries than they are when the plant is trained to a dwelling-house. What an acquisition it would be if a Pyracantha could be raised with berries distasteful to birds! From an ornamental standpoint some forms are decidedly superior to others. From this circumstance seedlings, which are notoriously variable, should not be planted, but specimens obtained from cuttings of the best kind. They are best grown in pots till planted permanently. Another advantage of plants raised from cuttings is that they flower and fruit in a smaller state than seedling.—H. P.

The Herbaceous Lupine.—The old-fashioned herbaceous Lupine, *Lupinus polyphyllus*, is now coming into its own as a garden flower. A very few years ago we had only two or three blue forms, some white ones, and the blue and white one called bicolor or Foxii. But the seedling-raiser has been at work, especially since the introduction of the pink or rose-coloured Lupines, and now there are many colours and shades. Mr. Amos Perry, Messrs. Barr and Sons (Mr. J. W. Barr being particularly keen on the improvement of the Lupine), Messrs. Cheal and Son, and others have been at work and have sent out some beautiful flowers. In private gardens some keen amateurs have been at work, and I saw a lovely set of seedlings in a Scottish garden the other day. These had originally come from a small packet of seed, the produce having been seeded, and the progeny of these selected and employed as seed parents also. Pinks, purples, whites, blues, bicolors, and yellowish shades were among them. There was a lovely primrose-coloured one, prettier than any shown at the London shows of late. The work is still going on, and it is difficult to say where it will end. The spikes have also been much improved in size and symmetry.—S. ARNOTT.

FORTHCOMING EVENTS.

- August 17.—Pitsmoor Flower Show. Sweet Pea Show at Sheffield.
- August 18.—Flower Show at Brighton.
- August 19.—Shrewsbury Show (two days).
- August 20.—Flower Show at Aberdeen (three days).
- August 21.—Flower Show at Forfar (two days).

WORK AMONG THE CARNATIONS.

HERE is yet time to propagate Malmaisons by layering, the reasonableness of late propagation being proved by the resulting plants, properly treated, never hanging growth as those rooted much earlier in the year not infrequently do. It is worth the extra trouble to layer into 2-inch or 3-inch pots, the plants receiving not the least check to growth by this method, and when properly rooted, repotting is easily effected into 4-inch or 5-inch pots. I use only a little flaky leaf-mould for drainage for the layering pots. It saves watering—and water is not of advantage to the layers—if the frames are shaded during direct sunshine. A little ventilation keeps the air fresh in the frames, and it is a curious fact that, as autumn approaches, the plants do well with more and more ventilation till the sashes can be dispensed with altogether in fine weather.

Perpetuals will all be properly staked before now, and there will be fairly constant attention needed to the tying of advancing shoots, which at this period grow amazingly fast, and if left untied for a day or two are sure to drop over, when it is impossible to straighten them once more. The circumvention of aphids is also a weekly affair. A box of Tobacco powder kept beside the plants is handy for dipping into or dusting on affected tips, or the plants may be sprayed with a proper insecticide; but on the whole I prefer the Tobacco powder, which does not affect the delicate bloom, so desirable to be perfect, on the foliage.

Manuring.—There are soils in which splendid Carnations are produced without the aid of manure, and which to manure would simply spell ruin to the plants. There are, however, less satisfactory soils in which the plants cannot be grown without applying manures at brief intervals, the time for commencing the application being indicated by the foliage assuming a less lively green than hitherto. The safe plan is to apply dressings or to water with manure-strengthened liquid before this stage is evident to the unpractised eye, and it usually occurs as soon as the pots in which the plants are to flower are well filled with roots. It is a very great mistake to use stimulating manures, sulphate of ammonia, for instance. The simplest material is soot. Well-diluted cow-manure solutions are satisfactory, while a number of proprietary manures suitable to the wants of the Carnation are to be had. Slight applications, it may be noted, are always to be preferred to larger ones.

Winter Quarters.—Towards the end of the month or early in September the plants will be relegated to their winter quarters. We have such a well-ventilated structure for summer growing that there is here no hurry to transfer them, the impossibility of giving abundant ventilation in the winter house being a decided disadvantage at this period. It not only brings on the blooms too rapidly, but the later growths are considerably weakened, so that by the time Christmas arrives, the plants are in a very depressed condition. The proper course to pursue would therefore be to give all possible ventilation night and day as long as the weather permits.

Tynninghame.

R. P. BROTHERSTON.

HARDY HIMALAYAN PRIMULAS.

(Continued from page 400.)

P. farinosa (Linn.).—It is unnecessary to say much about *P. farinosa*, which, as it occurs in Western Tibet and Chamba, at a height of from 12,000 feet to 17,000 feet, is practically the same as our native Bird's-eye Primrose. As with us, *P. farinosa* of the Himalayas frequents grassy hillsides and bogs. *P. farinosa* and *P. denticulata* have produced a hybrid called *P. Fortunei*, but this will not stand much frost, and should be grown in a cold frame.

P. geraniifolia (Hook.).—From the Chumbi Valley, Sikkim, at a height of 10,000 feet, we have *P. geraniifolia*, a close ally of *P. cortusoides*, with

base. Pax considers *P. Munroi* and *P. Traillii* as the same. In gardens *P. Munroi* has bluish and *P. involucrata* white flowers, with a yellow eye.

P. minutissima (Jacq.).—Here we have a tiny species which, with *P. Heydei* and *P. reptans*, form Pax's section *Minutissima*, but which Watt classes with the *Denticulata*. It is a minute *Primula* indeed, bearing two or three flowers on short scapes above the foliage. It is stoloniferous, with the leaves mealy beneath and with purple flowers. It is the only one of the section which seems amenable to cultivation here. It should be grown in an alpine house or frame.

P. obtusifolia (Royle).—This handsome species is closely related to *P. elongata*, and belongs to Pax's section *Callianthæ*. According to Sir George Watt, it is to be met with in Kunawar,

leaves, which are mealy underneath, are distinctly crenulate, and are produced after the flowers. The purple flowers have the petals entire or partially emarginate. According to some, *P. purpurea* is a variety of *P. Stuartii*, but the former has the fruit linear, erect and exceeding the calyx, while *P. Stuartii* has the linear fruit about the same length as the calyx, and the flowers of the latter are yellow and perfumed.

P. Reidii (Duthie).—One of the most exquisite sections of the *Primulaceæ* is that of the *Soldanelloideæ*, which gives us some fifteen or sixteen species. *P. Reidii* was first discovered by Duthie in Kumaon, and it was afterwards found in Chamba. It is still very rare in cultivation, but is a charming plant, with soft, hairy, toothed leaves, inflated calyx and deflexed flowers. The leaves are obovate-spathulate, and the flowers, though apparently very distinct in their arrangement from those of *P. capitata* and its allies, yet come closely to them in their dispositions. It is a beautiful little plant, with pale yellow or ivory white flowers. This gem should be treated as a biennial and cultivated under glass.

P. reticulata (Wall.).—Pax places *Primula reticulata* in the section *Cordifoliæ* and Watt in that of *Petiolaris*. It resembles in some respects *P. sikkimensis*, but is very distinct. The leaves are more cordate in form and have longer petioles. The scape of *P. reticulata* is proportionately longer, the corolla tubes narrower, the much exerted mouth annulated, and the fruit is ovoid. It thrives under the same cultivation as *P. sikkimensis*.

P. rosea (Royle).—Almost universally known, *P. rosea* requires no description here. It flourishes best by the side of water; but can be successfully cultivated in a small bog or in a moist border. Its brilliant rose purple flowers, which appear before the leaves, are of the most delightful colouring, and a mass of this plant is a fascinating sight indeed. In Nature it frequents sandy and gritty deposits of streams, and is undoubtedly much finer in moist than in drier places. It is perfectly hardy, but requires occasional division. Among the best varieties are *P. rosea splendens* and *P. r. superba*. *P. elegans* (Duby) is *P. rosea elegans* of Hooker f., and is a superior form of *P. rosea*. *P. rosea* occurs in the North-West Himalayas. It belongs to Pax's section *Farinosæ* and Watt's *Rosea*.

P. rotundifolia (Wall.).—Here we have a very distinct species, belonging to Pax's section *Cordifoliæ* and to Watt's *Petiolaris*. The leaves are mealy and rounded, cordate, with scapes about twice the height of the leaves and bearing two whorls of brilliant purple-pink flowers. It promises to be pretty hardy, and grows well in pots. It is plentiful in the Himalayas from Kashmir to Sikkim.

P. sibirica (Jacq.).—This has a wide distribution, and in one or more of its forms occurs in the Arctic regions of Europe, Asia and America, as well as in other parts of Asia. It is plentiful in the Himalayas, where it is found from Zanskar to Lahul at a height of from 13,000 feet to 15,000 feet. It is allied to *P. involucrata*, and has lilac or pink flowers. In cultivation it varies greatly in size and in the shade of colour. It sows itself and does well in the open. It belongs to Pax's *Farinosæ* and Watt's *Rosea*.

Morelands, Duns. JOHN MACWATT.
(To be continued.)



PRIMULA SIBIRICA, A HARDY HIMALAYAN PRIMROSE WITH LILAC OR PINK FLOWERS.

petiolate, pubescent leaves and having usually single umbels, but occasionally two, one above another. It has the lobes of the leaves acute. This species is rather liable to injury in winter, but is moderately hardy, and makes a good cold-house plant.

P. involucrata (Wall.).—This general favourite is practically the East Himalayan form of the widely spread *P. sibirica*, and is one of the easiest of all to cultivate in a moist soil. It is at home in the bog, in moist parts of the rock garden, or in the border. It dies down to the crown in winter, and may easily be destroyed at that season. It is so well known as to need no description, but may be said to have rather leathery, smooth, slightly glaucous leaves and slender scapes, carrying from three to six flowers in umbels. It is one of the so-called spurred *Primulas*, which have the pedicels embraced by an involucre of ascending parallel bracts, which are spurred at the

Kumaon, Sikkim and Bhutan. It has rugose, glabrous leaves, ovate or obtuse, and mealy underneath. On a slender scape about twice the height of the leaves it bears a many-flowered umbel of lilac flowers. In its native habitats it is very abundant, and gives off a strong metallic odour. A yellow-flowered form (probably a distinct species) is found at a higher altitude, and this has a delicate smell. I have an intense dark claret-coloured *Primula* with drooping flowers, which is, I consider, the most beautiful *Primula* that I possess. Although it has been grown as *P. obtusifolia*, it may be *P. Gammieana* (King), but this point I hope to make certain when it flowers.

P. purpurea (Royle).—This *Primula*, from Tibet, Lahul to Kumaon, at a height of from 10,000 feet to 14,000 feet, is a highly variable species, and considerable confusion exists regarding it. Pax calls it var. *macrophylla* of *P. nivalis*, but it is generally accorded specific rank. The

A FRAGRANT GUELDER ROSE.

VIBURNUM CARLESII is the daintiest member of the *Viburnum* family. It is a Korean species, and was first introduced to England in 1902 by Messrs. Louis Boehmer and Co., they having sent a plant to Kew after growing and propagating the plant in their Japanese nursery for twelve or thirteen years previous to distributing it. *V. Carlesii* forms a small, rounded bush up to 3 feet or rather more in height. The leaves are broadly ovate, the flowers pale flesh pink. These are deliciously fragrant, and borne in a closely packed, rounded cluster 2 inches to 3 inches across, lasting, during favourable weather, in good condition for from two to three weeks. Though quite hardy, the fact that the inflorescences commence to develop at the ends of the shoots in the winter and the flowers expand in April and May makes it desirable to select a somewhat sheltered spot for this treasure from Korea. Cuttings root fairly readily towards the end of July and during August in a propagating-frame with slight bottom-heat. For a year or two growth is slow, but, once the plants are 6 inches high, they produce shoots much more freely. The plants commence to flower when quite small. The most suitable soil is a well-drained sandy loam in which leaf-mould and peat have been freely mixed. A. O.

PHYLLOCACTI IN AUGUST.

ANYONE who hopes for a good display of these gorgeous flowers next year—and who does not?—should be careful as to the treatment given the plants at this season. Particular care should be taken that they are not shaded in any way, as by full exposure to the sun from now onwards depends their future show of bloom. They must be watered with moderate freedom, while an occasional dose of weak liquid manure will be helpful. As the branchlets of *Phyllocacti* are rather weighty, it is very necessary to see that they are effectually staked. The stakes, however, should show as little as possible. For most plants one will suffice, looping up the side branches to it. Should any pieces be accidentally broken off, they may be placed round the edge of a pot which has previously been well drained and filled with some sandy soil. Stood on a shelf in the greenhouse and kept moderately moist, these cuttings will root, and in spring they may be potted off singly. The mistake is sometimes made of withholding water for too long a period. In the growing season the plants require almost as much moisture as *Pelargoniums*. The established plants should not be dried off at any time; but even in winter enough water should be given to keep the soil slightly moist, increasing the supply as spring approaches. H. P.

COLOURED PLATE.

PLATE 1500.

THE LILACS AND THEIR CULTIVATION.

ALTHOUGH nearly three and a quarter centuries have elapsed since the common Lilac was introduced to our gardens, it is still one of our most beautiful and popular shrubs, and the opening of its blossoms is usually looked upon as the culminating point of beauty of the spring garden. And not only is it dear to the hearts of garden-lovers, for through



VIBURNUM CARLESII, A BEAUTIFUL AND FRAGRANT HARDY SHRUB FROM KOREA.

many generations its praises have been sung and its beauty extolled by poet and artist. Its peculiar virtues in regard to garden adornment need little seeking, for it is a vigorous shrub, perfectly hardy, will grow almost anywhere and, though of rather stiff outline when out of flower, the weight of its flower-heads at blossoming-time is sufficient to incline the branches into graceful lines without hiding the flowers. Moreover, the delicate shades of the flowers, together with their exquisite perfume, leave little to be desired from that aspect.

The Best Soil.—Lilacs thrive best in good loamy soil. They will also grow in sand, but do not bloom so freely as when growing in the better

material. Moreover, they pay for a little attention to feeding, and the more vigorous the current season's shoots, the better will be the flowers of the succeeding year. Thorough ripening of the wood is essential, and for this reason it is wise to give open and sunny positions as far as possible. Feeding may take the form of an occasional application of liquid cow-manure during May and June, or a surface-dressing of well-decayed manure may be given during the earlier month.

Propagation is conducted in a variety of ways. The types or species can be raised from seeds or, in some cases, by detaching suckers from the base of old plants. Garden varieties, on the other hand, are usually increased by grafting upon stocks of the common Lilac or by layering. At one time the habit prevailed of grafting varieties upon stocks of the Oval-leaved Privet, but it was never a satisfactory method, as such plants were short-lived, though free-flowering. Grafting, however, is not a commendable means of increase, whichever stock is used, for grafted plants are very prone to produce suckers, which, if not removed as soon as they appear, soon affect the well-being of the scions. Plants raised from layers are always to be preferred, and purchasers would do well to insist upon such.

Pruning is a rather important operation in connection with Lilac culture, and the failure of plants to bloom well may often be traced either to lack of pruning or lack of nourishment at the roots. In the first place, the bases of the plants must be kept free from suckers. Then weak shoots should be removed from the insides of the bushes, and here and there the weaker outer shoots must be thinned out. The object of all this pruning is to induce the plants to concentrate all their vigour upon the production of a limited amount of strong young wood. Plants which have outgrown their positions or have become taller than is desirable may be cut back into quite old wood. This may be done as soon as the flowers fade, or, if the owner does not mind losing a year's flowers, the pruning may be carried out in March. When pruning is accomplished at this

early date, the longest possible growing season is obtained. Lilacs which are to be used for forcing are grown specially for that purpose, and the shape of the plants is usually sacrificed in favour of flower-producing wood. All worthless shoots are removed on several occasions during the summer, and such shoots are never allowed to grow more than 3 inches or 4 inches long, the object being to concentrate all the energy into the building up of the wood which is most likely to produce flower-buds. Towards the end of August each plant is chopped round with a spade, and the ground is opened a little by working the spade backwards and forwards. This operation assists materially in the ripening

process. As a rule, from two to three years are allowed to elapse between the times when various plants are forced.

Selection of Varieties.—The garden Lilacs of the present day are very numerous, and present a considerable range of colouring, while many have double flowers. They have been derived from two species, *Syringa vulgaris* and *S. persica*. The former is the commonest and most vigorous kind. It is well known as a bush or sometimes as a small tree 15 feet to 20 feet high. A native of Eastern Europe, it is said to have been introduced in 1597. The second species, *S. persica*, commonly called the Persian Lilac, is another very old garden plant, for it was introduced from Persia about 1640. It is, however, less frequently seen than the other kind, although it is an excellent shrub for small gardens, for it rarely grows more than 3 feet or 4 feet high, and bears elegant panicles of lilac, very fragrant blossoms with the greatest freedom. *S. chinensis*, sometimes called the Rouen Lilac, is a hybrid between the two species referred to above. Growing 12 feet to 15 feet high, it forms a shapely bush and blooms very freely. Of the many garden varieties of Lilac, the following will be found to be a good selection:

Single-Flowered Varieties.—Alba, alba grandiflora, Frau Bertha Damman, Marie Legraye and noisettiana, white. Marie Legraye is shown in the accompanying coloured plate. Charles X., rosy purple; Congo, large, red; Géant des Batailles, dark red; La Ville de Troyes, purplish red; Mme. Kreuter, rose; Philemon, red; Princess Marie, lilac; and Souvenir de L. Späth, dark red. The last named is also shown in the coloured plate.

Double-Flowered Varieties.—Alphonse Lavallée, bluish; Doyen Keteleer, rose; Dr. Masters, lilac; Le Gaulois, red; Mme. Abel Chatenay, white; Mme. Lemoine, white; Michael Buchner, lilac; President Carnot, lilac; and Sénateur Volland, reddish lilac.

In addition to the garden Lilacs and their parents, however, there are others which deserve attention. Thus we have the very handsome *S. villosa*, a Chinese species which blooms three weeks later than the common sorts. It grows into a very large bush and bears immense heads of reddish lilac flowers, which, unfortunately, are not very fragrant. Then there is the large-growing *S. Emodi*, a handsome, vigorous bush, which bears creamy white blossoms during late June or early July. *S. japonica*, again, is another handsome kind, although it ought to have a little more sun than we have in this country to do itself justice. A tree in Japan, it forms a bush here. The cream-coloured flowers are borne in large, elegant panicles in July. *S. pekinensis*, from the mountains of Northern China, is another tree form which bears large heads of cream-coloured flowers, while the new white-flowered, pinnate-leaved *S. pinnata* from China is an exceedingly interesting shrub. The Transylvanian *S. Josikæa*, however, is scarcely worth planting,

except in very favourable places, for it is almost invariably seriously injured by spring frosts. D.

THE BLUE SIBERIAN COLUMBINE.

ONE of the first *Aquilegias* to flower, the Blue Siberian Columbine, *A. glandulosa*, is also one of the most dainty and graceful in habit. A foot or rather more in height, the blue and white flowers are singularly attractive, both in the rock garden and flower borders. For the alpine-house



AQUILEGIA GLANDULOSA OR THE BLUE SIBERIAN COLUMBINE.

the Blue Siberian Columbine is a delightful subject in pots or pans. Seeds form a ready means of increase, and the tufts when they consist of several crowns may be divided, August and September being a good time. Flowering early in the season, it is worth while planting this Columbine in a position facing south-west or west, with the idea of affording the slender flower-buds and blooms protection from the morning sun when in a frozen state, the result of a late spring frost. *A. glandulosa* delights in a moist, gritty soil of sandy loam and leaf-mould.

THE DAFFODIL IN AUSTRALIA AND NEW ZEALAND.

(Continued from page 401.)

Shows.—These in New Zealand were the surprise packet *par excellence*. I have not been able to trace more than four by name in Australia—Sydney, Geelong, Melbourne and Ballarat. But there are others, for one of my correspondents says there are “three principal ones,” mentioning the last three named. I hope if these notes meet the eye of any of the secretaries or others who can send me information and schedules of these unknown exhibitions that they will kindly do so, and thus confer a favour on THE GARDEN, the Royal Horticultural Society’s “Daffodil Year Book,” myself, and all whom my words reach. Knowledge of each other’s doings and mutual interest in one another are good things in themselves. We know where we are better then; we are not so apt to call our geese swans; we live and learn. As a Daffodil man I want to do what little I can to bring Daffodil people together, even if it is only by reading about one another’s doings. Not that it need stop there, for I hope that I may be sometimes sowing seed which will bring about a more personal connection.

Beginning with the most northern, the New South Wales Show, this is fortunate in having as its hon. secretary Mr. H. H. B. Bradley of Margaret Street, Sydney. There is no doubt it is the most important one in the province. As long ago as 1909 it gave an award of merit to a bunch-flowered variety, *Danæ*, raised by Mr. Bradley. Since then five more varieties have had either this or the higher first-class certificate given them, notwithstanding 1911 and 1912 being fallow years. The other shows are all Victorian. Although perhaps Melbourne, as the metropolitan show of the province, is theoretically the principal one, I am told that practically Ballarat is the best, as the date on which it is held is the most generally suitable. At the 1913 show Mr. Leonard Buckland of Keyham, Camperdown, won the big forty-eight class. Half those he staged were his own seedlings, and among the others he had Macebearer, Robespierre, Empire, Bernardino, Lord Kitchener, Fleetwing, Victory, Tudor, Florence Pearson, Kittiwake, Lemon Queen, Noble and Armeline. The

best flowers in their respective sections were: Yellow trumpet, Lord Roberts; bicolor, Weardale; white, Icicle (a seedling of Mr. Buckland’s); incomparabilis, Bernardino; Barrii, a seedling of Mr. Buckland’s; Leedsii, White King (a seedling of Mr. D. V. West’s), beating Empire; and Poet, Horace. If this is a fair sample of the best Victorian show, it is obvious that a winner there would have a “look in” at either London or Birmingham.

Now let me open the surprise packet. Twenty-one names dropped out. I was taken aback. I had no idea that New Zealand had so many

and I do not suppose I have every one that there are on my list. From Auckland in the north to Dunedin in the south must be getting on for a thousand miles; hence the show season is a long one. Last year it extended from August 28 (Auckland) to October 8 at Lawrence. The most important shows are probably (to judge by the schedules) those of Auckland and Hutt in the North, and those of Canterbury, Dunedin and Oamaru in the South Island. I have not seen a Lawrence schedule; but as I am told that the climate down there is particularly good for colour, and that the Daffodil is a specially honoured inhabitant of the Lawrencean gardens, I expect it will be a pretty good one. The Canterbury Society (headquarters, Christchurch) has a special Narcissus committee, with Mr. A. E. Lowe, head-gardener at Otahuna, Tai Tapu, as secretary; while both Auckland and Dunedin have certificate committees which perform similar but more general functions. The scheme of the New Zealand schedules is usually on the same lines as our own, collections, types, single blooms and seedlings all having classes assigned them. Two little things that I chanced to notice in going over the schedules are of interest. In the Dunedin Report, 1913-14, I read: "There is evidence of increased interest in the Narcissus Competition owing, no doubt, to the adoption of the classification of the Royal Horticultural Society." The other is, I imagine, the judge's pencil note against Class 1 at Auckland. Part of the "conditions" reads: "Forty distinct varieties, of which thirty kinds must be represented by at least three blooms, while not more than seven blooms may be shown of any one kind." And this is the remark by the side: "Committee should see to compliance with the mechanical points." I shake hands with the writer, be he judge or layman. Do I not know the time it takes, and, far worse, the bewildering effect it has when there is too much of it!

The number of the shows was only part of the surprise, although, as already stated, I do not suppose that I have every one on my list. Mr. Grindrod of Auckland whose name is known to the readers of *THE GARDEN*, divides shows in the North Island into two classes (1) *bona-fide* horticultural and (2) "Daffodil at homes," run by churches as attractive side shows to bazaars or as parish functions. One of the best is that of St. Mark's, Remuera, where the Vicar, the Rev. W. Beatty, is a good, practical Daffodil man. I have the schedules of two of these church-run shows before me—St. Luke's (Anglican), Rotorua, which is a small one, and the Cambridge Daffodil Society, run under the auspices of the Cambridge Presbyterian Church, which is a large one. Another example is Johnsonville (Wellington) Bulb Show and Sale, which was held on September 10 and 11, 1913, in "aid of the Methodist Parsonage." Eighteen out of forty-one classes were for Daffodils. In five others they might be used if competitors wished. I notice one was for a decorated mantelpiece. I think it a capital

idea, and one that societies at home might adopt with some practical advantage. All this is food for thought, and possibly imitation.

Dealings.—From the list of some of the flowers of Mr. Buckland's forty-eight at Ballarat last year it will be seen that some of our best things have gone to Australia. Should this possession of the best be thought to be an isolated case, a perusal of Messrs. W. H. Higgins' list at once puts any doubts at rest. *Croesus*, *Challenger*, *Empire*, *Furnace*, *Michael*, *Miss Willmott*, *Robespierre*, *Sea Horse*, *Sir Horace Plunkett* and *Tamerlane* are all there, with many more of lesser value. Then take Messrs. Arthur Yates and Co.'s Auckland catalogue. Twenty-nine of Professor A. W. P. Thomas' seedlings are offered at prices ranging from 2s. to 30s. each. Clearly there is a good trade done in expensive varieties in these distant parts of our Empire. Ah! but the responsibility of those who write and comment on the latest

I appreciate all they have done very much, even if I do not mention them separately and individually by name.

JOSEPH JACOB.

CALOCHORTUS MAWEANUS.

THESE delightful and attractive bulbous plants, belonging to the Order Liliaceæ and sometimes spoken of as Star Tulips and Mariposa Lilies, do not seem to be grown as much as their beauty justifies. Our climate does not seem to be ideal for their cultivation, though with perfectly drained, light, porous soil, protection from heavy winter rains and thorough ripening of the bulbs after flowering, either by lifting or protecting them by a glass-light, some amount of success may be obtained. Probably the climatic conditions prevailing on the western side of North America, where these plants hail from, are much more kindly



CALOCHORTUS MAWEANUS, AN ATTRACTIVE STAR TULIP OR MARIPOSA LILY.

and choicest blooms that we see in England! Such an one is verily between the devil and the deep blue sea. Editorial requirements make selection and criticism imperative, and *then* the luckless wight gets this: "I spent two or three hours yesterday to see what you said about Robespierre, as I remembered you had said something about it. If it is not a good one I will blame you!" That same person disclosed his order. Quite a nice little one: *Bert Sands*, *Brilliance*, *Croesus*, *Empire*, *Much-the-Miller*, *Royal Sovereign*, *Tudor*, *Bull Dog*, *Countess of Stamford*, *Diogenes*, *Gannet*, *Grootvorst*, *Harmony*, *Onslaught*, *Target* and *White Star*. I think he can take care of himself!

And now I must stop, and my last paragraph must be a word of very hearty thanks to all my kind correspondents, male and female, Australian and New Zealandian, who have honoured me with letters and photographs and catalogues

and less sodden during the resting season than in our own cloudy land. While early planting is the keynote to success with many bulbous plants, it is much more necessary with the *Calochorti*, and since a very free soil comparatively dry through the winter is required, yet ample water during the growing season, the moraine should prove a likely habitat for them in our gardens. Having had considerable success with several of the choicer species of dwarf *Narcissi* in that position, I propose trying the Star Tulips there, and hope to report progress at a later date. One of the features common to several of the genus is the way in which the inner surface of the petals is more or less heavily coated with filament-like hairs. By virtue of their showy flowers and exceptional colours, the Star Tulips or Mariposa Lilies never fail to attract attention when one is fortunate enough to have them in flower.

REGINALD A. MARRY.

DECIDUOUS FLOWERING SHRUBS DURING 1914.

THE season of 1914 will long be remembered as an ideal one for these ornamental garden subjects. Never have I known them to flower so well. Doubtless the sunny autumn of last year and the heavy rains of March had much to do with it. The Ribes and Prunuses, which were among the earliest to flower, were equally as productive as the Buddleias, which are now expanding their long sprays of mauve-coloured blossoms. Speaking of Buddleias, one cannot recommend too highly the variety *B. magnifica gigantea*. It is a charming subject for a large bed, particularly if edged with *Ceanothus Gloire de Versailles*. They both flower at a time when most of our other flowering shrubs are over. Both require hard pruning in the springtime, cutting the young wood back to within two or three eyes of the base.

The Philadelphuses, of which Mont Blanc is about the best, have well repaid for the amount of

and as far through if allowed room to grow. Lilacs and Viburnums have never flowered better. We have a large bed of Lilac here in variety, planted 9 feet apart, and the effect when in flower is most pleasing, the ground between the plants being used for *Erigeron speciosum* and *Aster acris*, so planted that we have a display throughout the whole of the summer months.

Almonds growing in exposed positions flowered well and long, and are now carrying heavy crops of fruit. Like the Peach, they suffered badly from the blister at the time the winds were so cold during April. This, after all, is only a reminder that they hail from a warmer country than our own. The Cydonias, of which there are now so many excellent kinds, were a sight not soon to be forgotten. The late Mr. Milner was particularly fond of planting these together on mounds 10 feet or 12 feet apart, and only those who see the effects of his work, where the plants have been allowed to grow at will, can realise what a charming effect is now produced. We have one such mound here, made twenty years or more ago, the base being now planted thickly



AN AUSTRIAN HAREBELL (*CAMPANULA PULLA*) IN THE ROCK GARDEN.

space they occupy. By growing a collection of these in various aspects it is not at all difficult to have them in flower for many weeks. As is well known, they are charming subjects for cutting for large vases. They will stand any amount of pruning after the flowering is over, so that all the energy available is directed to the young growths, which usually appear in June and July.

We have now a host of *Spiræas* to suit almost all positions and seasons. *S. confusa* is particularly good in May. The flowers are white, and are produced on the previous season's growths, which suggests that these, too, require pruning after flowering is over. The plants have a particularly decorative effect, even when not in flower, owing to the light and feathery manner of their growth. *S. Anthony Waterer*, a dwarf crimson-flowered variety, makes a very charming and peaceful picture when planted with *Acer atropurpurea*. It is also an excellent shrub for a rock garden, and flowers in July. *S. arifolia* is more suitable for brightening up heavy shrubberies, and reaches a height of 12 feet or more

with Darwin and Cottage Tulips, which flower at the same time as the *Pyrus*.

Shendish Gardens, Herts. GEORGE BURROWS.

CAMPANULA PULLA.

A NATIVE of the Austrian Alps, this species is one of the daintiest of the dwarf Harebells. It is a very old garden plant, having been first introduced in 1779. Growing 4 inches to 6 inches in height, the nodding, bell-like blossoms are at their best during June. The colour is a pleasing shade of purple or violaceous blue. Having chosen a pocket in the rock garden for this Austrian Harebell, make up a gritty, stony compost containing sandy loam, peat and leaf-mould. Increase by division is best done in the spring, at which time the young shoots may also be inserted as cuttings, when they will root freely in sandy soil. *C. pulla* thrives in the crevices between stones, and should be included among the Campanulas grown on the wall garden. The comparatively large bells seem almost too heavy for the slender stalks to support.

WORK AMONG GRAPE VINES.

SO far the weather this year has been quite favourable for the Vines, and the bunches of Grapes look very promising. The weather may not be of a settled nature during the months of August and September, and if this proves to be the case, the cultivator must very carefully watch every bunch and do all he can to finish the colouring of the berries so that they will not only look well, but keep well if necessary.

What to Do in Bright Weather.—In houses where the berries are colouring, it will be advisable to ventilate freely both night and day, but, of course, more so during the daytime than at night. At this season the air becomes very cool towards evening, and from midnight to sunrise it is often very chilly. Cultivators often fail to realise this, and consequently they leave the ventilators open too wide the last thing at night, and mildew then spreads rapidly, not only on the leaves, but on the berries too. It is not necessary to use fire-heat. If the front ventilators are almost closed at sunset and the top ones are left 3 inches to 6 inches wide on the side opposite to that from which the wind blows, there will be no cold current of air passing through the interior of the structure. In these circumstances the berries of black Grapes will colour in twenty-five days.

What to Do in Cold, Dull Weather.—I now refer to weather that is generally adverse to the proper ripening of Grapes without artificial aid. The amount of ventilation must be reduced both night and day, and on dull days the pipes must be warmed as well as at night. There is always a danger of moisture condensing on the berries, and if this happens repeatedly and the sun shines on them suddenly, even for a very brief time, while they are in this condition, the berries will soon decay. Although the ventilators may be almost closed, warm pipes will have the effect of preventing the condensation of moisture, as the air will be quite buoyant. Under these conditions, black Grapes will take thirty days to finish colouring satisfactorily.

The Proper Quantity of Foliage to Retain.

It is a mistake to allow a lot of lateral growth at this season, as the young foliage prevents air and light reaching the main leaves and basal buds on the bunch-bearing shoots. All small side shoots must be cut off regularly, so as to well expose the main leaves. With regard to the bunches of white Grapes, it is absolutely essential to success that only main leaves be retained, and these must be put to one side a little so as to expose the bunches if the latter are to be well coloured—a deep amber.

The conditions suitable to the good colouring and maturing of the Grapes are equally suitable to the keeping of the berries. In spells of dull, damp weather the cultivator should closely examine every bunch and cut out forthwith any decaying berries. The bad berries are generally found near the centre of the bunch, and if one is left there for a few days, the greater portion of the bunch will soon decay. When the bunches are cut from the Vines, give the latter a thorough syringing, and ventilate more freely night and day. Keep the soil of the border in a nice, moist condition, not only while the bunches remain on the Vines, but throughout the winter.

AVON.

GARDENING FOR BEGINNERS.

TREATMENT OF CHRYSANTHEMUMS IN LATE AUGUST.

THE majority of the buds are "taken" late in August, because they include those of the incurved section as well as late first crowns and second crowns of the Japanese section and the earliest terminal buds. At this stage the plants grow very freely, and the inexperienced cultivator must be careful regarding watering and

strength of the plant is concentrated in its development after the side shoots are removed.

Terminal Buds.—Fig. B shows how these buds are dealt with. There is really no difference in the method of "taking" these to that of "taking" crown buds. In the latter case shoots are broken off; in the former, buds. The bud to "take" or retain is the central one, as shown at No. 1. All the others, Nos. 2, 2, with dark lines drawn across their small stems, are removed; then the stem of the plant is free, as shown at Nos. 3, 3. No. 4 depicts the central bud swelling freely. Terminal buds of naturally late-flowering varieties are useless for all practical purposes, as they are too thin, somewhat resembling a bloom of a single-flowered variety without possessing the latter's good points. Terminal buds on some plants of the naturally early flowering varieties, especially those of some of the incurved



A.—"TAKING" A CROWN BUD.

feeding. If the weather is dull and cool, it would be unwise to give much liquid manure, as the soil does not dry quickly. Clear water should be applied when necessary, as the pots are full of roots and the soil in which they are growing and increasing must not be allowed to become at all dry. Some chemical manures may be given according to the directions supplied with them. In this way during wet weather, when it is inadvisable to apply liquid too frequently, much valuable aid to growth can be given and without causing a too sappy condition of the stems and leaves. Of course, the strength of the plants must be maintained, so that they will be well able to support the buds as the latter form.

"Taking" Buds.—Late first crown and second crown buds must be taken as shown in Fig. A. The bud, No. 1, must be just free of all side shoots when the latter, Nos. 2, 2, 2, are cut or broken off. If they are picked out with the point of a knife, as is often the case, there is a danger of the buds being injured, and the slightest damage done to them while in such a small state will spoil them for exhibition purposes or for home use in the conservatory and dwelling-house. Nos. 3, 3 show the stem of the plant cleared of all side shoots. No. 4 represents the crown bud swelling freely, as practically the whole



B.—"TAKING" A TERMINAL BUD.

ones, generally develop into deep, refined flowers of rich colour.

Top - Dressing.—Too frequently the inexperienced cultivator fills the pots too full at the final potting, and then there is not much space left for watering and top-dressing. In such a case, strips of tin or zinc may be placed round the rims of the pots, as shown in Fig. C. The soil, almost level with the rim of the pot after the first top-dressing material has been put on, as shown at No. 1, prevents further additions to it; but if the zinc strip, denoted by the arrow, is put in position, more soil may be added, and feeding and watering done readily enough afterwards. Even strips of fibrous turf in which the grass has died may be used with considerable success instead of zinc.

G. G.

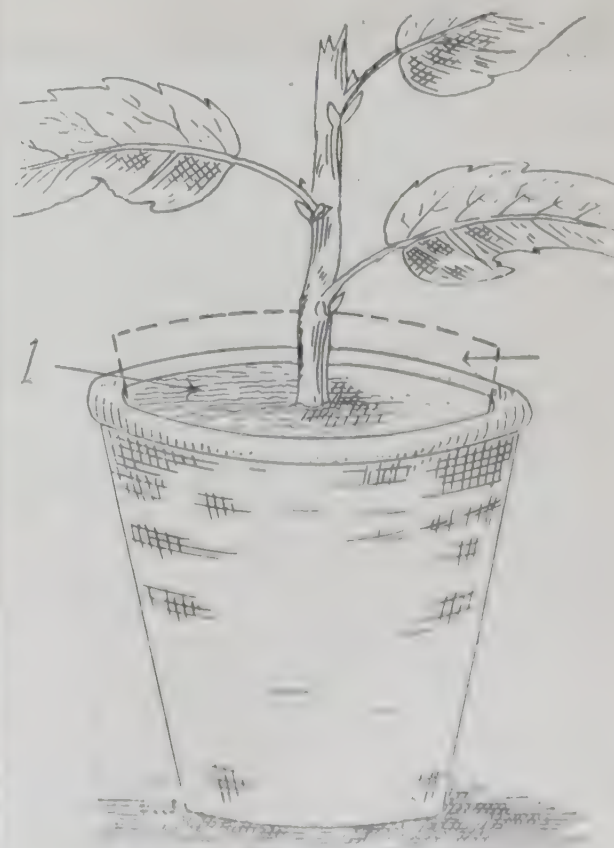
NOTES ON ANNUALS.

Staking and Tying.—My own practice in growing such thin-stemmed subjects as *Gypsophila elegans* in clumps or rows is to place a few stakes around and in the bed, binding the tying material first to the outside stakes and then across the centre a few times. This method divides up the clump into small sections, and is found to be efficacious, not only in keeping the growths upright through all weathers, but also to be beneficial to the general welfare of the plants. Placed early, the tying material and stakes are soon hidden from view by the flowering stems. Other annuals, such as the Shirley Poppy and *Coreopsis* type, do best individually staked and allowed ample room to develop. A point often too seriously worried over is

The Question of Watering (at least this is my own considered judgment, bred of experience). I confess to having a much greater partiality for, and faith in, the Dutch hoe than in the watering-can, and my ground is decidedly on the light side. In regard to this question of water, my usual rule is to "let well alone," meaning by this that so long as no signs manifest themselves that things are wrong, I act on the natural assumption that they are right, and the frequent use of the hoe makes for the latter state.

For cutting the following are found very useful: Shirley Poppies.—Cut young and open in water. African Marigold.—Prince of Orange. Stocks.—Ten-week. *Nigella damascena*.—Miss Jekyll. Annual Chrysanthemum.—Eastern Star. Zinnia.—Double varieties. Sweet Sultan.—Giant. Cosmea.—Early flowering strain. Godetia.—Double Rose. Sweet Scabious.—Treated as an annual and shown as such. Salpiglossis.—Grandiflora. Clarkia.—Elegans. *Coreopsis*.—Drummondii.

B. W. LEWIS.



C.—THE METHOD OF TOP-DRESSING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Fig Trees in Pots which are intended to produce ripe fruits in April must be placed in the open air in order to harden and prepare the trees for early forcing. If possible, the pots should be half plunged in ashes as a protection to the roots from strong sun, for although no great quantity of moisture will be necessary, the roots must not be allowed to suffer from want of water, or the foliage may drop before the growth is quite matured, and the prospect of a successful crop will be reduced in consequence.

Melons.—The latest-planted Melons should be making good progress, and the shoots well up the trellis. Secure a full crop as soon as possible, and endeavour to grow the plants without a check. Keep the side shoots stopped, and never allow the plants to become overcrowded or dry at the roots.

Tomato Plants for winter supplies must not be allowed to become stunted before their final potting. Nine-inch pots will be large enough, and the soil may consist of two-thirds turfy loam and the remainder of decayed horse-manure. This may be prepared a few days previous to use, and should be made tight about the roots. If damp, sunless weather sets in, these plants ought to be placed in some cool, well-ventilated structure and fully exposed to the sun. Another sowing may be made now to produce a few trusses of fruits in the beginning of next year.

Plants Under Glass.

Pelargoniums.—The majority of these plants should be cut back to within a few eyes of the previous season's growth. The pots may then be placed on their sides and allowed to remain until growth commences, when the plants may be repotted and placed in a well-ventilated frame on a bed of ashes. Water sparingly and keep the ventilators open night and day. Cuttings may be inserted in sandy soil and placed in a cold frame until rooted, when they should be potted into 3-inch pots and grown in cool quarters quite close to the glass.

Cyclamen which are growing in cold frames should be freely ventilated, removing the lights at times while the weather is suitable; but the plants must not be subjected to heavy or continual rain. Green fly and thrip are sometimes troublesome, and must be kept in check by fumigating. Young plants should be potted on as it becomes necessary, and carefully watered until the roots have reached the edge of the new soil.

The Flower Garden.

Antirrhinums.—If the best varieties of these are obtained, they are certainly among the most satisfactory bedding plants, and may be had in almost any colour ranging from white to very dark red. For early summer bedding the seeds should be sown now and the plants grown in nursery beds during the winter, but for a later display, from July to October, the seeds may be sown in January or February and the plants put out in May. To ensure a continual display through the autumn, the flower-spikes must be removed as soon as the blooms have fallen. Water will also be necessary during dry weather.

Pansies for Spring Bedding.—These should now be ready for transplanting into nursery beds, where they may remain until the beginning of October. Keep them well supplied with water, and stir the soil between them with a small Dutch hoe. Aubrietias also ought to be transplanted now and treated in the same way. Protection from strong sun will be necessary until the plants make fresh roots. All spring bedding plants should be pricked out with as little delay as possible. Allow a good space between the plants in order to keep them stocky.

The Hardy Fruit Garden.

Raspberries.—Now that the crop is over, the old fruiting stems should be removed and those for next season's crop secured to the wires, as with autumn winds, many of the strongest shoots may be broken.

Autumn-Fruiting Raspberries should now be in a forward state, and will benefit by a good soaking of water at the roots, which will help to

prolong the supply as well as increase the size of the fruits.

Autumn-Fruiting Strawberries will also benefit by careful and frequent watering. If the plantations are in good condition, a supply will be available well into October, providing the weather is favourable. For this purpose we find St. Antoine de Padoue the best variety. The runners are secured in the autumn, wintered in a cold frame, and planted on a well-prepared border about the last week in March.

The Kitchen Garden.

Celery.—The early plantations of Celery should now be growing freely, and will require a good supply of moisture at the roots. There must be no mistake about this matter, especially previous to earthing up the plants. The early plants should be earthed up as soon as possible, and while this is being accomplished, care must be taken to keep the hearts of the plants quite free from soil.

Winter Spinach.—A good sowing of Prickly Spinach should be made about the third week in August for use during the winter and spring. If the ground is dry at the time of sowing, the drills may be watered a few hours previous to sowing the seed. When the crop is through the surface, a careful watch should be kept for slugs, which are troublesome during the autumn. Frequent dustings of soot and wood-ashes may be given with advantage.

Endive.—The Batavian Endive makes an excellent salad during the winter, when good Lettuces are scarce. This should be sown now, transplanting the seedlings to a protected border as soon as large enough to handle.

Lettuce should also be sown now for use during the early winter. Another sowing may be made two days later. Hardy White Cos, Maximum and Stanstead Park are good varieties for early winter use.

Radishes may still be sown. A spent hot-bed would suit them well, as a quick, succulent growth is necessary. They will benefit by plenty of water at the roots.

Mustard and Cress.—Make weekly sowings in a cool, shady frame, so that no break in the supply may take place.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Mushrooms.—Continue to collect manure to form another bed in the Mushroom-house, and spread it out in small ridges in an open shed to dry, as previously advised. It is not necessary to waste much time in separating the straw, as only the longest need be collected. Turn the manure frequently to prevent it becoming overheated, in which case much of the ammonia is lost. When sufficiently sweetened, it should be rammed into beds as firm as possible, after which insert a thermometer, and spawn when the heat declines to anything from 85° to 90°.

French Beans.—A sowing may now be made in frames or pits for a late supply, and, to encourage a sturdy growth, the lights should be kept off until they are actually required as a protection against early frosts. It will, perhaps, be as well to allow more than the usual distance between the rows, and also the plants, as it is important that each plant should have ample light and air for this late crop. As to varieties, there is not much to choose from, but possibly Canadian Wonder is as good as any for this sowing.

Radishes.—As the earlier sowings are usually made in odd corners or between the rows of other small-growing crops, those sown after this date should be made in a border not too much exposed to the sun. It is also essential that they be thinned when quite young, otherwise the result will be too much top growth and very poor roots.

The Flower Garden.

Hollyhocks.—The rust fungus that attacks these stately plants is this season more in evidence than ever, with the result that the plants, instead of being ornaments, are extremely unsightly. I find those treated as annuals, or at least biennials, are not nearly so liable to attacks from this pest as

older plants; indeed, among several hundred plants treated in this way here, there is scarcely any trace of it at all. Collect seeds from the earliest-ripened capsules and sow as soon as they are sufficiently ripened, afterwards pricking out the seedlings into a warm border.

Sweet Peas.—In many cases Sweet Peas are inclined to be somewhat stunted in growth, and consequently seed-pods are forming in greater numbers than usual. These must be regularly removed; and, indeed, if time permitted, it would be advisable to reduce the flower-buds considerably to encourage the plants to make growth. As already advised, continue to feed the plants with liquid manure or a small sprinkling of Clay's Fertilizer.

Campanula pyramidalis.—This favourite biennial, usually grown in a cool greenhouse, is, I find, perfectly hardy, as during the past two years it has produced splendid spikes, and the colour, if anything, is slightly more pronounced. Plants by this date will be sufficiently advanced in pots or boxes, and may be planted out in a sheltered spot. Should any doubt exist as to their hardiness, a few plants may be put out as an experiment.

Plants Under Glass.

Campanula isophylla.—This lovely trailing plant, so useful for hanging over the front of the stage or from hanging baskets, will now have passed out of flower. To replace the stock of older plants, a batch of cuttings should be secured at once; they root freely in a cold frame where shade can be afforded. It can, of course, be raised from seed; but, generally speaking, cuttings make the better plants.

Schizanthus.—To secure plants for spring flowering, seed may be sown now, and for a succession sow again in a month. As almost every seed will germinate, it will be necessary to sow thinly. Three or four seeds in a small pot will be ample, afterwards thinning the seedlings to one in each pot. From the very outset they must have cool treatment, and be kept sufficiently close to the glass to prevent them becoming spindly.

Roman Hyacinths.—For early forcing, a number of bulbs should be potted up without delay, and, for this early supply, pots should be used in preference to boxes, as being more easily handled. After potting, give them a soaking of water, and plunge the pots in ashes to the depth of 3 inches or 4 inches.

Salvia Glory of Zurich.—Plants intended for autumn flowering will now be well rooted in their flowering pots, and may be assisted with liquid manure very frequently from now onwards.

The Hardy Fruit Garden.

Summer Pruning.—No time should be lost in completing this important work, as, if delayed longer, the shoots absorb a great deal of the sap that should go to swell the fruits and build up the fruit-buds for another year. In going over the trees, opportunity should be taken to remove all deformed fruits, which would only have to be thrown away in any case.

Apricots.—Now that the fruits will be ripening, a sharp look-out should be kept for earwigs, which are most destructive to the ripe fruits. Perhaps the best way to trap the pests is with small pots filled with hay and placed conveniently among the branches. These must be examined every other day, and the insects destroyed.

Fruits Under Glass.

Figs.—Trees carrying heavy crops of fruit must be kept growing steadily, and, if any doubt exists as to their being able to ripen the crop, it will be advisable to thin the fruits considerably. At the same time, thin out the growths where they are at all crowded, and apply liquid manure at frequent intervals. Every means must be taken to keep the foliage clean by syringing and damping down the paths and walls several times a day.

Early Grapes.—Where most of the bunches have been cut, those remaining may be taken to the fruit room and bottled; this is all the more necessary if the foliage has become infested with red spider. Throw the house open and apply the syringe vigorously, as it is important to the proper ripening of the rods that the foliage should remain as long as possible on the Vines.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

Rape. *Red Clover.*

	Control (plain soil only) ..								
	Farmyard manure (at 15 tons per acre) added to soil								
	Guanó (at about 1oz. per square yard) added to soil								
	Clay's Fertilizer (at about 3oz. per square yard) added to soil								
<i>Radio-active Ore.</i>	{(1 part ore in	14 parts of soil)
	{(1 " "	28 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	56 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	112 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	224 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	448 " "	" "	" "	" "	" "	" "	" "	" "
<i>Residue.</i>	{(1 " "	2,240 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 residue in	14 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	28 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	56 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	112 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	224 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	448 " "	" "	" "	" "	" "	" "	" "	" "
	{(1 " "	2,240 " "	" "	" "	" "	" "	" "	" "	" "

NOTES ON GERMINATION.

July 27. All the lots dressed with residue are strongest; ore, control, farmyard and Clay's much alike. Guano latest.

With the Mignonette and Dimorphotheca the difference was very marked, the plants in Nos. 2, 3 and 4 being very good, though those in No. 4, *i.e.*, treated with a mixture of Clay's Fertilizer and oxide of uranium, were the best. This was also the case, though less pronounced, in the Calendulas and African Marigolds. It will therefore be seen that the radio-active ore, residue and black oxide of uranium do have a beneficial growth on some plants and under certain conditions, but there is, evidently, a good deal of further research work needed before definite conclusions can be arrived at. Messrs. Sutton have rendered a public service in what they have done, and we feel sure they will continue the experiments with a view to obtaining more definite data on what will eventually prove a very important item in the cultivation of crops.

				Loz.	of Area.
Control (plain soil only)				9 $\frac{1}{2}$	9th
Farmyard manure (at 15 tons per acre) added to soil				10 $\frac{1}{2}$	5th
Guano (at 1oz. per square yard) added to soil				9	11th
Clay's Fertilizer (at 3oz. per square yard) added to soil				13 $\frac{1}{2}$	1st
Radio-active Ore.	{	(1 part ore in 12 parts soil)	(A) Ore mixed in soil	11 $\frac{1}{2}$	3rd (equal)
			(B) Ore placed at bottom of box	9 $\frac{1}{2}$	10th
	{	(1 " " 12 " ")	(A) Ore mixed in soil	10	7th
			(B) Ore placed at bottom of box	9 $\frac{1}{2}$	8th
	{	(1 " " 18 " ")	(A) Ore mixed in soil	10 $\frac{1}{2}$	6th
			(B) Ore placed at bottom of box	7 $\frac{1}{2}$	13th
	{	(1 " " 24 " ")	(A) Ore mixed in soil	8 $\frac{1}{2}$	12th
			(B) Ore placed at bottom of box	11	4th
	{	(1 " " 36 " ")	(A) Ore mixed in soil	12 $\frac{1}{2}$	2nd
			(B) Ore placed at bottom of box	11 $\frac{1}{2}$	3rd (equal)

RESULTS OF RADISHES.

RESULTS OF RADISHES.										Tops.	Roots.	Total	Order
										oz.	lb. oz.	Weight.	of Merit.
Control (plain soil only)										8½	11½	1 4	Lowest.
Farmyard manure (at 15 tons per acre) added to soil										12	12	1 8	9th (equal)
Guano (at 1oz. per square yard) added to soil										10	15	1 9	8th (equal)
Clay's Fertilizer (at 3oz. per square yard) added to soil										11	1 0	1 11	6th
(1 part ore in 12 parts soil) (A) Ore mixed in soil										9½	1 2	1 11½	5th
Radio-active Ore.	(1	"	"	12	"	"	(B) Ore placed at bottom of box	10	1 3	1 13	3rd		
	(1	"	"	18	"	"	(A) Ore mixed in soil	9	1 5	1 14	2nd		
	(1	"	"	18	"	"	(B) Ore placed at bottom of box	12	1 3	1 15	1st (equal)		
	(1	"	"	24	"	"	(A) Ore mixed in soil	8	1 3½	1 12½	4th		
	(1	"	"	24	"	"	(B) Ore placed at bottom of box	8	1 0	1 8	9th (equal)		
	(1	"	"	36	"	"	(A) Ore mixed in soil	8½	14	1 6½	10th		
	(1	"	"	36	"	"	(B) Ore placed at bottom of box	9	1 1	1 10	7th		
	(1	"	"	48	"	"	(A) Ore mixed in soil	12	1 3	1 15	1st (equal)		
(1	"	"	48	"	"	(B) Ore placed at bottom of box	9	1 0	1 9	8th (equal)			

Flowering annuals, however, treated with black oxide of uranium gave different results. Mignonette, *Dimorphotheca* hybrids, Calendulas, and African Marigolds were tested. The oxide of uranium was used as follows:

1. Control (plain soil only).
2. Black oxide of uranium (one part in 2,000 parts of soil).
3. Clay's Fertilizer (at 8oz. to 40lb. of soil).

Bacterised Peat Experiments.—On the same occasion we were much interested in some experiments that Messrs. Sutton have conducted with Professor Bottomley's bacterised peat, referred to in our issue of November 1, 1913. These were in four series, viz.: 1, large plots in open ground; 2, plants growing in pots in pit sand only; 3, Lettuces and Dwarf Beans in soil; 4, Radishes and Lettuces in soil in boxes. In Series 1 the plots were as follow: A, control, no recent manure; B, top-dressed with bacterised peat at the rate of 8oz. per square yard; C, farmyard manure dug in at the rate of 20 tons per acre, and, after the plants were up, a top-dressing of bacterised peat, 8oz. per square yard; D, top-dressed with ordinary peat moss treated with sulphate of ammonia; E, farmyard manure as in Plot C, and, after plants were up, a top-dressing of ordinary peat treated with sulphate of ammonia, 8oz. per square yard. With Peas on these plots the following results were obtained: Plot A, 3lb.; B, 3lb. 2oz.; C, 3lb. 6oz.; D, 3lb. 1oz.; E, 2lb. 10oz. It will thus be seen that the farmyard manure, followed with the top-dressing of bacterised peat, gave the best results, *i.e.*, 4oz. more than B, treated only with a top-dressing of bacterised peat, followed by D, A and E in the order named. With Potatoes Stirling Castle, a midseason variety, the results were as follow: Plot A, 63½lb.; B, 76½lb.; C, 79½lb.; D, 66lb.; E, 82½lb. This difference

in the results of Peas and Potatoes is very interesting. When Professor Bottomley lectured to members of the Horticultural Club (see *THE GARDEN* for November 1, 1913, page 547), it was pointed out that the bacterised peat induced considerable root growth; but in Messrs. Sutton's experiments this has not been the case, especially with the Peas. In the pots and boxes of Radishes, Lettuces and Peas, where artificial watering was resorted to, the bacterised peat gave good results, and it would therefore appear to be of the most value as a manure during a wet season.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

NIEREMBERGIA FLOWERS INJURED (*Miss W.*).—We are unable to say what is attacking the Nierembergia. Probably the damage is done at night, and the culprit might be caught in the act by searching with the aid of a lantern; but possibly birds are to blame. There was no trace of insects or fungus in the specimen sent.

TREATMENT OF LILIES (*Alford*).—Withered flowers may always be removed at once, but the stems of the Lilies should not be cut down, unless badly affected by disease, till they are fully matured. Where diseased, it is better to cut them down and burn them as soon as flowering is completed.

BEDDING ARRANGEMENTS (*E. Sheppard*).—With so much white spar about the beds you should work for contrasting colours, and for the round beds we suggest Begonias or Violas, the former in crimson, orange, scarlet and pink; the latter in blue, royal purple, rich yellow and bronze; or you might mix these in the beds by planting both rather thinly. For the half-circular beds, No. 2, try Verbenas (pegged down) in pink, scarlet and purple alternately. For No. 3, Heliotrope President Garfield, pegged down, would be good, with masses of brilliant blue Lobelia for all the small beds marked No. 4. If there was not so much white spar about, white and pale yellow Violas and Begonias could have entered into the scheme, also Mesembryanthemum cordifolium variegatum, but these would appear sickly and ineffective in the circumstances.

KITCHEN GARDEN.

PEAS FOR INSPECTION (*J. H.*).—Late-sown Peas often suffer from drought, &c. We find no disease either of fungus or bacterial origin.

POTATOES WITH ROUGH SKINS (*Reader*).—The trouble from which the Potatoes are suffering is only skin deep. It is usually called "scab," and is very frequent on sandy soils. Steeping the seed tuber in formalin solution, a pint to thirty gallons of water, for two hours is occasionally a preventive; but, unfortunately, the fungus is also in the soil. Lime usually increases its effects.

PEAS NOT DOING WELL (*S. F. G.*).—The Peas must have done well up to the podding stage, as the haulm is strong. The trouble, no doubt, is at the roots. Have you examined the roots and base of the stems well and carefully for wireworm? It looks very much like the work of this destructive pest. Have the plants been very dry at the roots for some time? Peas will suddenly collapse from this cause, especially at the time of podding, when the strain on them is heavy. We have also seen the same result follow a too heavy application of patent manures.

EELWORM IN TOMATOES (*Novice*).—An attack of eelworm on Tomato roots is incurable. Turn out all the soil as soon as the plants are done, and either burn it or spread it on a pasture where there will be no chance of it being taken back again into the houses (or put into pots) for several years. Take care also that all the pots and crocks are thoroughly disinfected. Steam-heat or bake the soil in which you intend to grow Tomatoes next year. The spotting of the Tomato foliage is due to burning, probably arising from insufficient ventilation in the early morning.

TOMATOES DISEASED (*Dr. G.*).—Your plants are apparently suffering from the "sleepy" disease of the Tomato, which is caused by a fungus attacking the root and getting into and filling the vessels along which the water flows, checking the water supply to the foliage, with the result that the plant wilts and dies. The only thing to do—and even this, we fear, will not prove very satisfactory—is to earth up the plants, so as to induce fresh root formation from the stem. The best measure to pursue next year will be to sow the seed and grow the young plants in sterilised soil.

TOMATO FOR INSPECTION (*M.*).—The Tomato arrived all right, but not the leaf. The fruit sent is excellent, very fleshy and the flavour good; indeed, we could not wish for a better. The yellow colour at the stalk is only an indication that the variety has at some time been crossed with a golden variety. It is no detriment. Ventilate freely on warm, sunny mornings, and close the house up with sun-heat about 3 p.m. or 3.30 p.m., having previously syringed the borders,

floors and sides of the house, but not the plants themselves too much. On a heavy afternoon the temperature under this treatment will often rise to 80° or 85° Fahr. This, you will find, will move things on, and help the fruit to grow and ripen in a much shorter time. Of course, you must water with care, and if the plants are sickly, use clear water only, giving the border a slight dressing of lime and adding thereto a top-dressing of sweet maiden loam.

MISCELLANEOUS.

MOTH FOR IDENTIFICATION (*L. L.*).—The moth sent is the wood leopard moth; it is beautiful, but, unfortunately, a pest of fruit trees, especially of Apples and Pears, into the wood of which its larvæ bore and do considerable damage. It was illustrated in our issue for April 4.

PROPAGATING NURSERY STOCK (*B. Hartigan*).—We regret to say that we do not know of such a table as you suggest dealing with the propagation of nursery stock of all descriptions. If you procure text-books upon the different branches of horticulture, you will, however, find a good deal of what you require.

STERILISING SOIL (*R. M. L.*).—We think your method of sterilising the soil would serve your purpose well, but we should be inclined to use one-half per cent. formalin (a gallon of commercial 40 per cent. formalin to 200 gallons of water). We do not think it would be necessary to cover the ground with canvas, but the frames might be covered for three days and the soil afterwards left for three weeks to permit the formalin to evaporate.

INSECTS IN WATER (*O. R.*).—No doubt the insects present in the water are the larvæ of the gnats. Fish kept in the water will do much to keep down these insects (which, while they are harmless to the Water Lilies, are distinctly annoying to human beings), and will be better than putting on a thin covering of paraffin, which is perhaps the most deadly way of attacking gnats, but which is always attended with some danger of damage to the plants.

VARIOUS QUESTIONS (*N. M. M.*).—The Phlox is attacked by stem eelworms (see our reply to a correspondent recently on this pest). The Gooseberry is attacked by the fungus Botryosphaeria ribis, which fruits on the dead wood. All the affected branches should be cut out and burnt immediately, so as to check the spread of the disease at its onset. There is nothing to show to what the death of the Apples is due, for the shoots sent are quite healthy. The piece of root appears to have been wedged in between stones.

INSECTS IN COLD FRAME (*Linden Tree*).—The insects complained of must be hiding in the frame or underneath the pots, pans or boxes in which seeds are sown. A good plan will be to remove these receptacles from the frame and give it a good dressing, but particularly on the bottom, with unslaked lime. When the pots, pans or boxes are returned to their places, the lime will prevent the insects or slugs, if there are any, from making their way to the seedlings. If the pests are woodlice or earwigs, which may be answerable for a good deal of the mischief, they may be trapped by laying some small pots with a little dry moss in each in the frame, and examine them every morning, shaking the insects into a pail containing a little boiling water. Another plan particularly successful with woodlice is to take some Potatoes and cut them in halves. Then scoop out a part of the middle and lay the hollowed portions, concave side downwards, where the pests are most likely to congregate. They must be examined every morning. Another point we can recommend is to visit the frame when dark, and by the light of a candle or lamp you will probably find some of your enemies hard at work, when their destruction is an easy matter. If the sawdust is thoroughly burnt—that is to say, turned into ashes—it would be valuable for many garden purposes, more particularly if your soil is of a stiff, clayey nature. In that case a liberal dressing may be worked into the soil whenever it is being dug. For herbaceous borders, Roses, &c., a dressing may be applied during the autumn months and the surface of the soil occasionally worked over with the hoe. For potting soil a small proportion of ashes may be mixed with the ordinary compost.

CLAY SOILS (*B. V. Y.*).—These are usually difficult to deal with. Clay, however, is variable, and much will depend on Nature. As it happens to be badly weed-infested and has to be practically entirely made, you had better proceed by deep trenching and forking out all big weeds, such as Couch, Docks, Dandelions and the like. Gather these together with any brushwood and make a bonfire, the ashes from which would be valuable on the land. As you are taking in a portion of an orchard, you should have much wood to burn up after cutting down the trees. The best way to deal with such a soil would be to burn a portion of it into soft ballast, and, by incorporating this with the staple, you aerate, drain and lighten by a single action. Heavy lime dressings play a like part. It would assist matters if you plough off the rough herbage and burn that. We cannot say how long it would take to clear the ground; everything depends upon the nature of the weeds and the thoroughness of the work in cleaning the land. As you have no experience in such matters, you would do well to get expert advice at the start. For the formal Lily pool a supply of water under control would be best, and unless the clay is quite of a tenacious character and well puddled, cement had better be used. An overflow is always desirable. In both of the above much depends upon circumstances. Hardy plants for such a soil should include Peonies, Irises, Delphiniums, Spiræas, Kniphofias, Michaelmas Daisies, Heleniums, Phloxes, Campanulas,

Trollius, Chrysanthemums, Day Lilies and many more; but what would be exactly suited to the needs of the case would depend entirely upon the size of the borders. This also applies to the shrubs. When the borders are formed, or their size and position determined, write us again on these matters. Roses are usually at home in clay soils.

NAMES OF PLANTS.—*A. E. B.*—1, Rose Marie Pavie; 2, Rose Bettelstudent; 3, Rose Petite Marcelle; 4 and 5, garden varieties of Phlox, cannot match; 6, Colutea arborescens (Bladder Senna); 7, Melissa officinalis (Balm); 8, Philadelphus coronarius; 9, Polygonum cuspidatum; 10, specimen too incomplete for identification.—*H. H. G., Yorks.*—The Sweet Pea is of no value. The yellow Rose is much like Mme. Hector Leuilliot. It is a strong grower. If of dwarf habit, it may be Mme. Charles de Luze. The other variety is G. Nabonnand.—*J. C. W.*—1, Melilotus officinalis; 2, Lychnis coronaria; 3, Veronica longifolia; 4, Sempervivum montanum.—*W. Crook, Mancetter.*—1, Adiantum cuneatum; 2, A. gracillimum; 3, A. formosum.—*W. Banks.*—1, Festuca glauca; 2, cannot name without flowers, probably Ailanthus glandulosa; 3, Lathyrus latifolius albus; 4, L. rotundifolia; 5, Polygonum Bistorta; 6, Myosotis palustris sempervirens; 7, Veronica spicata variegata; 8, Linaria vulgaris; 9, Enothera fruticosa; 10, Geranium Endressii; 11, Antennaria dioica variety tomentosa; 12, Sedum rupestre; 13, S. spurium; 14, Stachys lanata; 15, Campanula pusilla alba.—*E. T. W.*—1, Eupatorium aromaticum; 2, Trautvetteria palmata.—*M., Stavanger.*—1, Too far advanced to say; 2, Mme. Audot; 3, Rosa alba.—*W. J. R.*—1, Probably a variety of Lælio-Cattleya bletchleyensis; 2 and 3, forms of Cattleya Mendelii; 4, Lælia xanthina.—*H. H. G., Yorks.*—It is impossible to name such scrappy specimens.—*Mrs. Sartorius.*—1, Cistus species; 2, Geranium species. The specimens were too scrappy for identification.—*J. B., N. Wales.*—Bocconia cordata.—*Torquay.*—Criminum species, probably C. longifolium.—*Miss J. K., Suffolk.*—Criminum species.

SOCIETIES.

HIGHCLIFFE GARDENERS' ANNUAL OUTING.

ON Wednesday, July 29, the members of this society had their annual outing, visiting Pylewell Park, the residence of W. Ingham Whitaker, Esq., and Elmers Court, the residence of Hugh Whitaker, Esq., both charmingly situated in the New Forest district. The first halt was made at Elmers Court on the way to Pylewell Park, the latter being about a mile distant. Mr. George Smeeth, the courteous head-gardener, met the members and conducted them round the extensive gardens, which, when completed, will extend to about twenty-three acres. There are some very attractive formal gardens here which remind the visitor of some of the old-world gardens. In quite suitable positions there are rock, water and alpine gardens of great beauty, where tiny tufts and huge masses of plants seem quite at home, judging from their flourishing condition. Very little formal bedding-out is done, but there is a wealth of flower. Large lawn areas are enclosed in clipped Cupressus macrocarpa hedges, the openings in these hedges being arched with the golden C. m. lutea, and very effective they are. Wall fruits and vegetables looked promising. Much new wall space was furnished with glass about two feet deep, and the trees were thriving under it. All the contents of the glass houses were equally well cared for. On arriving at Pylewell Park the members were received with every mark of kindness by Mr. Frank Hamilton, the able head-gardener. They were first shown the formal bedding-out in front of the mansion and the sunk Rose garden, which is laid out in formal-shaped beds with stone paths between. Some large bushes of Lavender are growing in each bed, and the whole are surrounded with Heliotrope, and outside the latter climbing Roses luxuriate on rustic trellises. Mr. Whitaker generously provided lunch and tea in a tent on the private cricket ground, a kindly thought on his part, which was much appreciated by the visitors. During the afternoon the members inspected a magnificent collection of flowering and rare shrubs. A long, winding grass slope led to the ornamental lakes, which extend to about half a mile in length. The grass slopes referred to are studded with Palms, Dracenas, Musas and other kinds of subtropical plants, and on the fringe of the woods Tree Ferns seem quite at home. They remain out all the winter. The fronds are loosely tied up and slightly protected, and bell-glasses are placed on the top. Water Lilies form huge masses of leaves and flowers on the surface of the water in the upper portion of the lake. Arum Lilies look charming peeping out of the water. Giant Gunneras spread their fan-like leaves over the waters, and Gladioli, Agapanthus umbellatus and a great variety of plants adorn the borders at the edge of the lake. Grasses are numerous. Kniphofia conspicua and Wistarias clothing the beautiful bridge spanning the water to an island must have a charming effect when in full bloom. Some clumps of Phormium tenax have spikes and leaves nearly fifteen feet high and almost as much through. A hedge of Bamboos here is very striking on account of the density and height of the individual plants forming it. Perpetual-flowering and Malmalson Carnations filled three large houses. Madresfield Court, Muscat of Alexandria, Alicante and Frontignan Grapes bore heavy crops of fine bunches in a long range of vineries, and Melons, hardy fruits and vegetables bore full crops. A striking feature in the plant-houses was Solanum Wendlandii trained under the roof glass and forming masses of blossom there. After engaging in games of cricket and quoits, the members left for home, having spent a most enjoyable time.

THE GARDEN.

No. 2231.—Vol. LXXVIII.

AUGUST 22, 1914.

NOTES OF THE WEEK.

More Flower Shows Abandoned.—We regret to say that quite a number of flower shows have been abandoned on account of the war. The Royal Caledonian Horticultural Society has decided to cancel all arrangements for the autumn show at Edinburgh. Shows at Glasgow and Brighton are abandoned, and the Royal Horticultural Society is postponing till happier times the Saxifrage Conference arranged for next year.

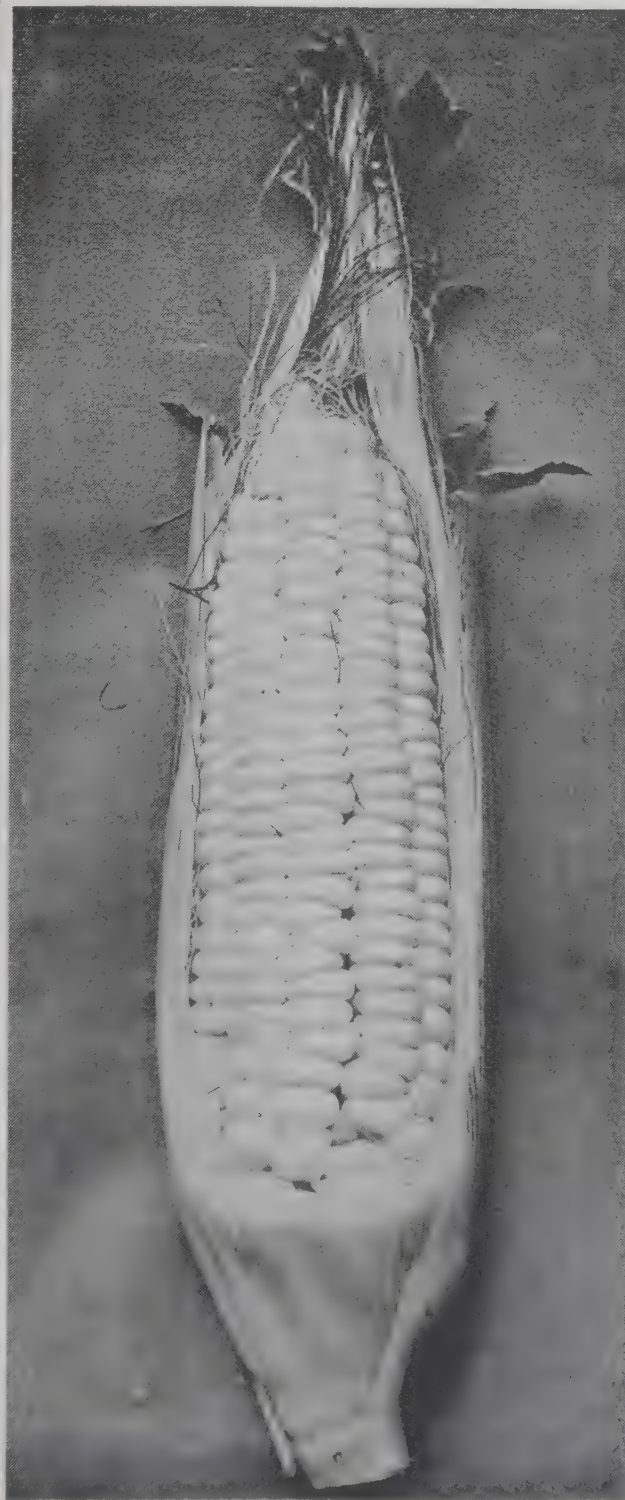
Our Food Supply.—From the returns just issued by the Board of Agriculture and Fisheries we are gratified to learn that the Wheat crop this year is not only 10 per cent. larger than in 1913, but is well above the average of the last ten years. The crop of Beans is the largest since 1907, while that of Potatoes is only slightly below that of last year, which was the largest on record.

The Wheat Supply.—The Board of Agriculture and Fisheries stated a few days ago that there was in this country sufficient Wheat to supply the whole population for about four months. They have now obtained more complete information, including returns of the stocks of Wheat and flour held by about one hundred and sixty of the principal millers in Great Britain. On the basis of the figures now available it may be said with confidence that there is actually in the United Kingdom at the present time, including the home crop now being harvested, five months' supply of breadstuffs. This is additional to the Wheat and flour on passage and due to arrive shortly.

Farm Horses and the Harvest.—A number of complaints have been received by The Board of Agriculture and Fisheries from farmers representing that all their working stock of horses has been requisitioned for military purposes, and that they are unable to harvest their crops, or are seriously impeded in doing so. His Majesty's Government have clearly stated in Parliament that it is their desire that such interference with harvest operations should be avoided; but where it has unfortunately happened that necessary working stock has been withdrawn, the Board of Agriculture and Fisheries would urge that neighbouring farmers, landowners and land agents should interest themselves in remedying the misfortune by some measure of co-operation, and that those in a position to do so should arrange to assist or to procure assistance for those whose stock has been removed to supply the needs of the nation.

Sugar Corn: A Useful Vegetable.—It is not easy to understand why Sugar Corn or Maize is so seldom used as a vegetable in this country. In the United States it is widely grown and much esteemed. By sowing early in the year, the

young green cobs may be had from July till October, and surely no crop could be more easily grown. The cobs must not be allowed to harden, but should be cooked while tender and served with melted butter. Among the best varieties



SUGAR CORN EARLY DWARF. A VARIETY OF RAPID GROWTH WELL ADAPTED FOR GROWING IN THIS COUNTRY

are Early Dwarf, Six Weeks, Sweet Triumphant, Country Gentleman and Concord.

Tomatoes in the Open.—Those grown out of doors must be regularly attended to, tying to their supports and removing all the foliage that is likely to hinder the early ripening of the fruits. Those grown against walls do not get the same amount of moisture as those in the open, so that they must be regularly watered, adding a sprinkling of manure from time to time.

Mushroom - Growing in Edinburgh.—The Scotland Street Tunnel, Edinburgh, which was for many years occupied as a gigantic Mushroom-house, is again to be devoted to the cultivation of this favourite comestible. It may be remembered that some years ago disease appeared among the Mushrooms, and that it was found necessary to abandon their cultivation in this tunnel for a time. It is now expected that the disease will have disappeared, and hopes of good crops are anticipated.

A Beautiful Torch Lily.—The generic name for these showy plants is *Kniphofia* or *Tritoma*, but the common sobriquet is that stated above, while they are also known as Red-hot Pokers and Flame Flowers. One of the finest, if not the best, is Lord Roberts, a grand, strong-growing variety with large, compact, bright scarlet flower-spikes, which vary in height from 5 feet to 6 feet. When shown a year or so ago before the floral committee of the Royal Horticultural Society it received an award of merit, but that body of experts considered it a variety of, or synonymous with, John Benary. However, there is no mistaking it, especially when seen at a distance by the side of the latter plant, as it is much brighter and is certainly more vigorous.

Eueryphia pinnatifolia.—Although we do not number very many Chilean species among hardy shrubs, those which are available are beautiful and worthy of extended cultivation. Some may only be grown in the warmer parts of the country, but there are others which may be planted in many parts of the Midlands or other places which possess a similar climate. *E. pinnatifolia* belongs to the latter set, and it is a very beautiful object when covered with its large white blossoms in July and August. Under the most favourable conditions, as at Trewidden in Cornwall, it grows 15 feet high and more through, a shapely bush, crowded at flowering-time with thousands of blossoms each 2 inches to 3 inches across. In some places the leaves are evergreen, but in others they fall during the winter. It is wise to plant it in a position sheltered from cold winds.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Lilium Melpomene.—Lovers of *Liliums* who like to have a nice batch of plants in the flower garden during the latter part of the summer should include the above-named variety in their collections. Good bulbs grow strongly and bear exquisite flowers of a rich colouring. In my opinion this *Lilium* is much superior to either *L. roseum* or *L. rubrum*. The flowers are borne on stems well thrown out from the main stem. It is also a grand *Lilium* for growing in pots, and looks charming in groups in greenhouses. —AVON.

A Seedling Rambler Rose.—I am sending a photograph of a peach and white coloured seedling

rubbish flowered earlier both times than another in ordinary soil of loam, peat and sand in a moister part of the rock garden. From the name of *saxatilis* one would consider this species should be a rock-lover, but it is evidently not too exacting in its needs. The deep rose flowers are very attractive. —MORAINÉ.

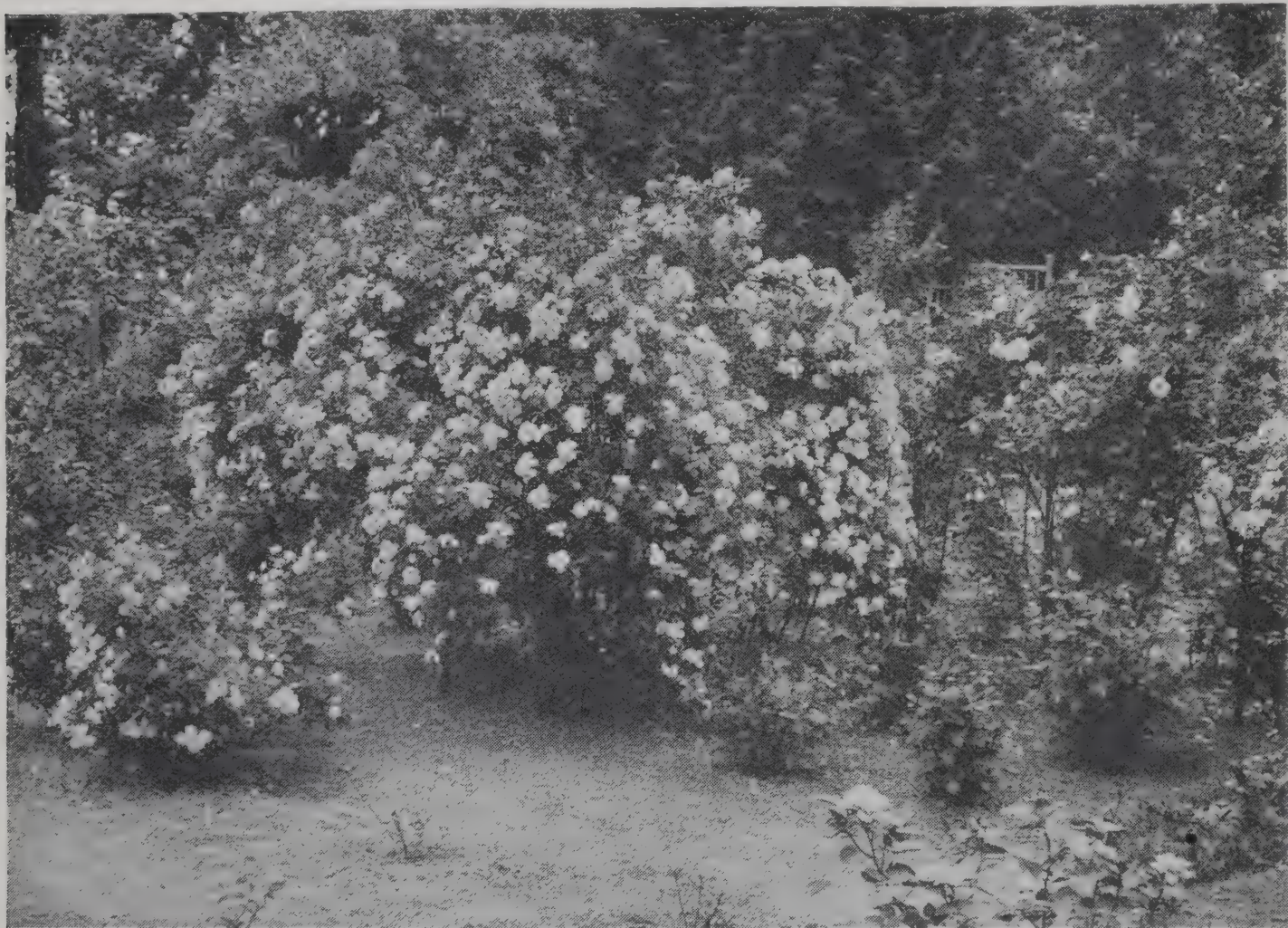
Two Beautiful Antirrhinums.—We have now a choice of many beautiful shades of colour among *Antirrhinums*; but when visiting the nurseries of Messrs. Dobbie and Co. at Edinburgh the other day, two of the varieties there specially attracted me. These were *Moonlight* and *Coccinea*. The former is a tall variety, and, as the firm rightly describe it, is "a beautiful shade of apricot yellow, slightly flushed with red on the upper lip." It is somewhat like Sutton's *Pale Apricot*, but the yellow is less aggressive. It received the Royal Horticultural Society's award of merit last

well in an exposed position where some other subjects less afflicted with tenderness than the ordinary *C. maritima* perished during the winter. It is thriving and has made a good plant. It is a subject which many admire for its foliage and its general aspect. I am not aware of any special name for this hardy variety. —S. ARNOTT, *Dumfries, N.B.*

Choisya ternata in Scotland.—Everybody admires the Mexican Orange, *Choisya ternata*, which forms such a handsome bush in favoured quarters, and whose glossy leaves and abundance of white flowers give great pleasure to lovers of sylvan beauty. It is never free from the suspicion of tenderness, and this doubt is too well founded, as many find, even in places where it is considered to be safe from injury by frost. It is very questionable if old plants will stand a severe winter so well as younger ones. Generally speaking, *Choisya ternata* is hardy, or practically so, in sheltered gardens in the South-West of Scotland, and there are places further North where it stands quite well in the open. I saw a good plant at Duns in Berwickshire the other day, and, though not so large as some of the bushes in the South-West, it was a really good and attractive one. We cannot hope to compete with the South of England or Ireland in our specimens of *C. ternata*, but it is a pleasure to think that in many Scottish gardens this fine shrub may be introduced with much satisfaction. A sheltered place should undoubtedly be selected. —N. B.

A Plant with Two Names.—I observe that *Houttuynia californica* is being offered as *Anemonopsis californica*, evidently a clerical error for *Anemopsis californica*, which, again, is a synonym of *Houttuynia californica*. Either *Anemopsis* or *Anemonopsis* is a misleading name, the former sounding so like the latter that it leads to confusion. *Houttuynia* is now the accepted title, and should be followed. This flower is being offered as an alpine plant, but it is very doubtful if it will prove hardy with us, and I should be glad to hear if any reader has found it capable of enduring our

winters. According to generally reliable authorities, it is a "greenhouse perennial herb," and I am not aware of any place where it is hardy. It is of rather creeping habit, and in the open is said to send out runners, by which the plant may be propagated. The ovate leaves are covered with small hairs, and it sends up stems varying from 6 inches to 2 feet in height, bearing a spike, spadix-like in appearance, with white bracts round the base. It flowers in the summer, and an American writer speaks of it thus: "The still vividly green lowland meadows suddenly bring forth myriads of white stars, which, in their green setting, become grateful resting-points for the eye. It loves a rather moist soil, and should be planted in spring. In the meantime it should only be tested in the warmer parts of the United Kingdom." —EXPERIMENTALIST.



A WELL-FLOWERED SEEDLING OF THE DAWSON RAMBLER ROSE. THE BLOOMS ARE PALE SALMON IN COLOUR, FADING TO CREAM.

of the Dawson Rambler Rose. Like the parent, it is early blooming, and very hardy and immune from disease. Its colour, though delicate, is quite distinct, and unlike any other rambler with which I am acquainted. Perhaps pale salmon, fading to cream colour, would be a more exact description than peach and white. The plant is a very heavy bloomer, the bloom this year being somewhat lighter than usual owing to a very unfavourable season. —E. K. BUTLER, *Jamaica Plain, Mass.*

Primula saxatilis Flowering Late.—*Primula saxatilis*, which bloomed earlier in the year, came into flower for the second time in July and lasted into August. It is closely related to *P. cortusoides*, and differs mainly in the longer pedicels. It is rather interesting to see how well it seems suited to the dry moraine, and a plant in one composed largely of whinstone and broken lime

September. The second variety, *Coccinea*, is an intense orange scarlet intermediate variety, a more intense scarlet even than that beautiful variety *Orange King*, with which I hope to associate it next season. —CHARLES COMFORT, *Midlothian*.

A Hardy Cineraria maritima.—*Cineraria maritima* is such an effective and pretty plant with its silvery foliage that it is a disappointment to many to find that it is not perfectly hardy with them, although it is so in mild places. I have a vivid recollection of seeing it apparently naturalised in some places in Ireland, while it is well known that in the South-West of England it is quite hardy. I have tried to grow it as a hardy perennial, and have lost it, when I had a garden in a milder district than my present one. Last year a good friend sent me a plant of a reputedly "hardy form" of *C. maritima*, and this has stood quite

A Blue Poppy for the Woodland.—*Meconopsis Wallichii* is a handsome plant growing about five feet high and producing erect pyramids of pale blue flowers. At Clandon Park it is grown with marked success and on a large scale in a beautiful woodland glade known as the Primula Dell. At Wisley, too, it is successfully grown in the woodland, where it withstands the winter without the least injury.—SPARTAN.

Iris susiana.—Those who have grown and flowered this Cushion Iris in pots this year would now do well to transfer the pots, plants and all, to the shelf of a sunny greenhouse and forget all about them for a space of three months or so. In that way the plant would receive the modicum of rest it requires, and in the so-called "baking" process become so fully matured that in all probability a better result at flowering-time another year will almost sure to follow. Only in some such way as this are the needs of this grotesque species likely to be met. Moreover, it is a gain to the gardener if he can put to sleep some of his treasures while he is enjoying the others.—E. J.

Mazus reptans in Scotland.—This charming little Mazus, still generally offered as *M. rugosus*, is doing splendidly in the moraine in the delightful rock and water garden of Mr. E. A. Hornel at Broughton House, Kirkcudbright.

A SIMPLE METHOD OF STORING FRUIT.

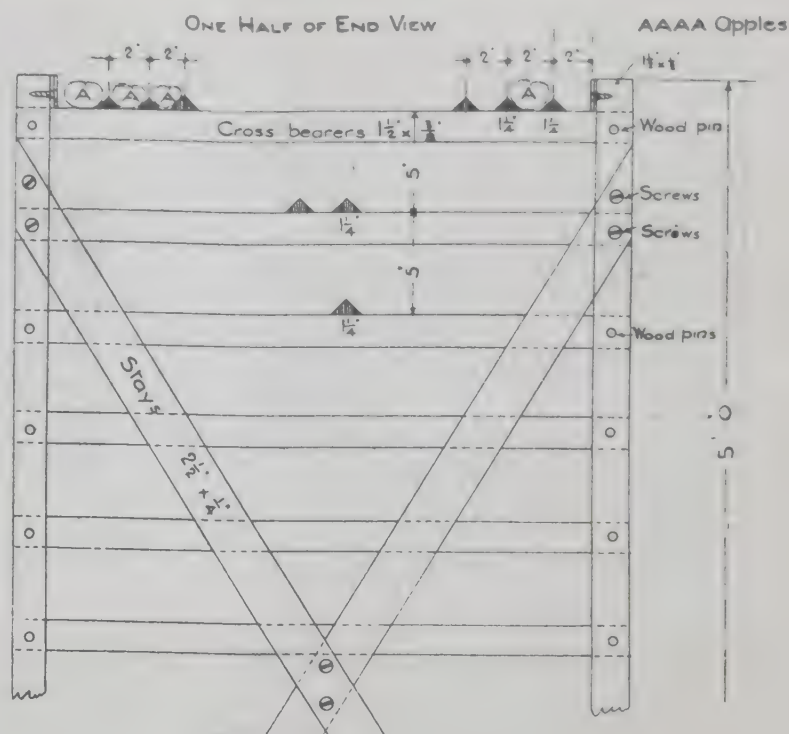
IN view of the wide interest now taken in the preservation of our food supply, we take the opportunity of reprinting from *THE GARDEN* the notes and illustrations on a very simple, but none the less useful method of storing fruit.

"I have kept my fruit in a most satisfactory manner on lattice trellis stores, and have taken the trouble to make and enclose a plan of one which I trust you will understand and that it may be of use, which will afford me pleasure after the courteous and helpful replies you have always accorded to my enquiries. My stands are made from rough sawn deal (odd pieces, in fact), and are, as you will see, 5 feet by 5 feet by 2 feet 6 inches. I have kept Apple Reinette du Canada on them until the middle of June, and attribute this success to the free air space all round

by too dry an atmosphere or by gathering the fruits too early.

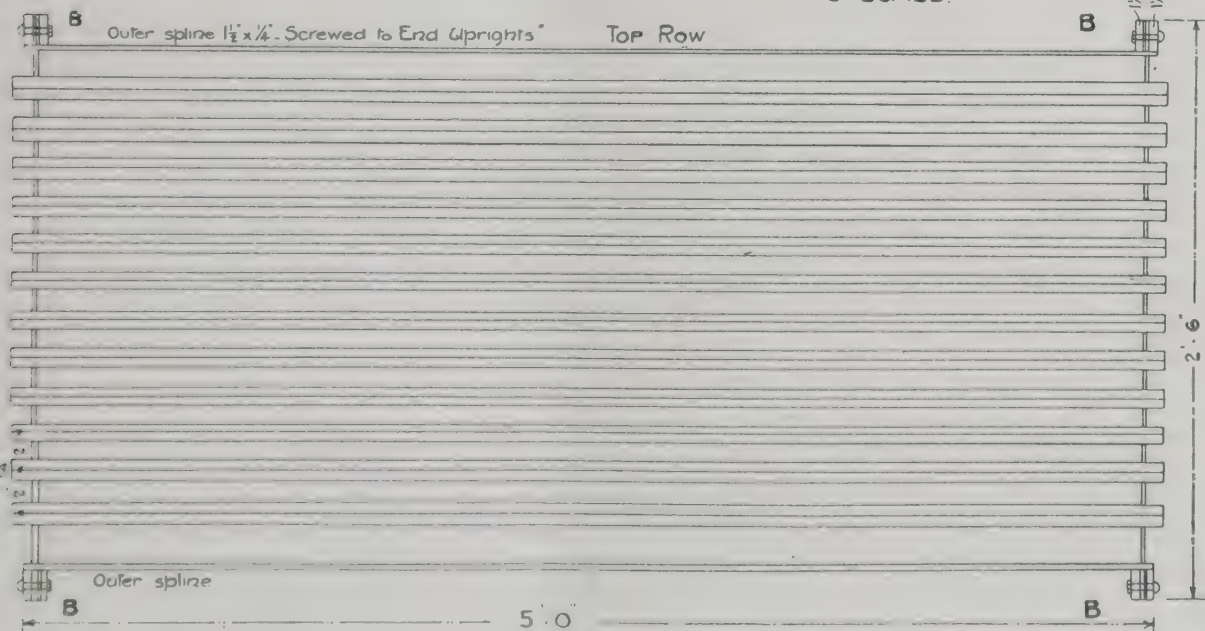
Chelmsford.

T. H. P. DENNIS."



END VIEW OF STORE. EVERY FRUIT IS VISIBLE.

3" SCALE.



PLAN OF THE TRELLIS FRUIT STORE.

It is apparently quite at home there already, and is highly pleasing among the stones, showing its dark green leaves and dainty little purple flowers so well among the gravel and shells from the neighbouring sea-coast. It was still well in bloom towards the end of July. The plants are facing full south, and the moraine slopes rapidly in that direction.

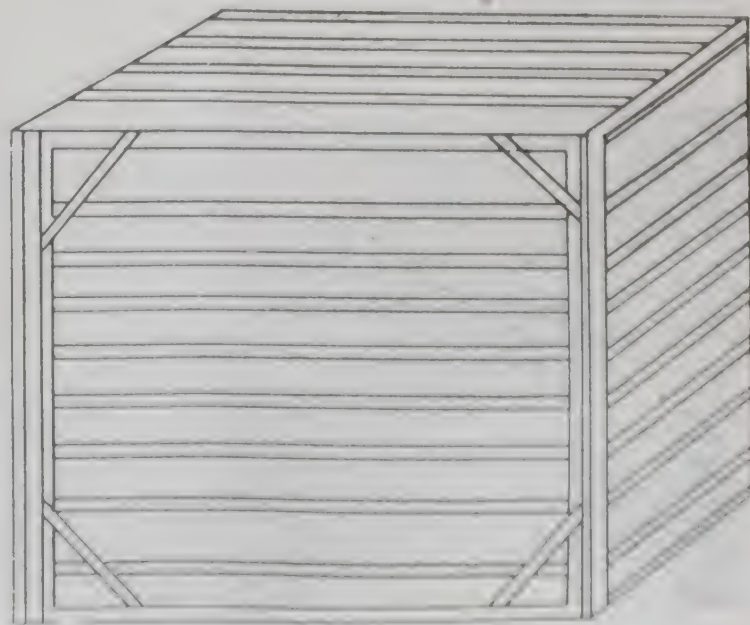
A Handsome Plant of Berberis dulcis.—One of the finest plants of *Berberis dulcis* to be seen anywhere in the United Kingdom is that in the old garden at Monreith. This I saw again the other day, and it is increasing annually in size. Sir Herbert Maxwell measured it in my presence, and it was about one hundred and five feet in circumference and quite twenty feet high. Of course, a plant such as this requires plenty of room to show its character and size, but this one has no lack of space, standing apart from other shrubs and covering this area without any crowding by other plants. It would be interesting to know if anyone has a bigger plant of *B. dulcis* in this country.—S. ARNOTT.

the fruits, which must not, of course, touch each other. I keep mine in a dry attic, and, as you will note, every fruit thereon is visible there. You will note on the plan a rough perspective view of the stand, and it is important that the strips shown at the four corners should be added front and back to attain perfect rigidity. The whole is a knockdown arrangement. I fasten the triangular strips to cross bearers, preferably with string, tightly lacing it; but there are other means by which this can be done should the space between the triangular spines be too much or too little. The chief points to remember in making a fruit store is that a free circulation of air is essential and the fruits should be visible from all sides. The shrivelling of the fruits is usually caused either

HERBS IN THE GARDEN.

THE time for the sowing of herbs is long past; nevertheless, the season of herbs is now coming, and some hints on their culture and their usefulness as decorative plants in the garden may be timely enough. It is at the present time that lovers of gardens take special interest in the plants grown, and make notes as to future treatment of them so as to secure improved effects. Herbs, I may say at once, are, in the majority of instances, much neglected. There is such a vast difference between those plants well cultivated and others which only manage to exist. Usually, the herb border is the one in which strong-growing weeds become well established.

Thyme, Sage and Mint should receive special attention, of course, for culinary purposes, but I would not hesitate to grow Sage, Thyme, Mint and Balm in flower-beds; beds suitably placed, say, near old walls or fences and



PERSPECTIVE VIEW. NOTE THE FREE AIR

buildings, or in borders near the entrance to the flower, fruit or vegetable garden. Sage and Thyme are my two favourites for growing in the way suggested. I used to make a point of raising a fresh stock of both every year; the Sage from seeds, and the Thyme from seeds and layers. When in flower the Sage bed looked grand and showed to advantage from a distance; the Thyme was not so conspicuous, but presented an equally pleasing effect from a closer view. The blue flowers of the Borage are also very telling when the plants are grown in groups. This is a good subject for cultivation in very poor soil, and will brighten up any odd corner where many kinds of plants will not live.

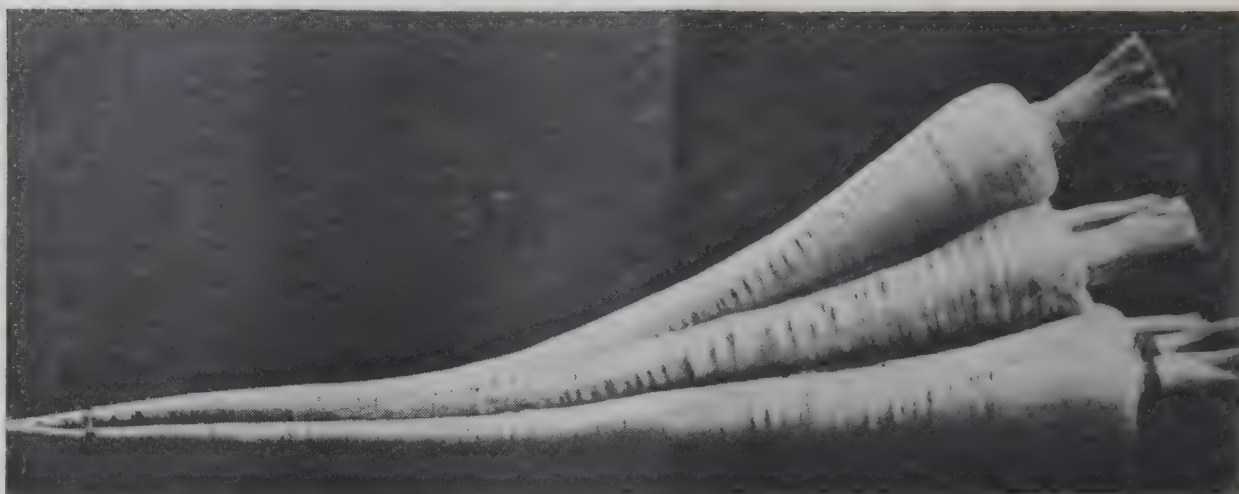
On the South Coast, Borage plants grow in masses in the shingle just beyond the tidal mark, the sea spray doing no harm to the plants or the flowers.

How to Propagate Thyme.—If any readers possess a few old clumps of these plants, they should deal with them in the following manner. Carefully spread out the shoots from the centre, leaving an open space there; clear away all decayed portions. Procure a sandy compost and place it in the centre of the prepared plant, filling up the space and covering quite half of the stems of the plant—the basal parts—so that only a few inches of the young points are left visible. It is, then, only necessary to keep the new compost regularly watered, and the old plants will soon root into it. Early the following spring the clumps may be divided, when hundreds of rooted layers will be available for making up fresh beds. The work of layering should be done now.

This is a good way of treating old plants that are grown solely for kitchen use, as, when so dealt with, they live longer. It will not be necessary to lift and divide the layered clumps; simply leave them as they are. I need only add, further, that herbs for drying must be cut when in full flower; then their strength as such is retained. AVON.

THE STORING OF VEGETABLES.

IT behoves all persons now to economise in every shape and form with foodstuffs and to store all possible material for future use. With vegetables a splendid opportunity presents itself, because much may be dealt with; and, as they are plentiful in gardens this season, now is the time to set about the various details necessary. I



PARSNIP TENDER AND TRUE. PARSNIPS KEEP BEST IN GROUND WHERE THEY ARE GROWING THROUGHOUT THE WINTER.

purpose detailing the best means to adopt on both a large and a small scale, whereby the cottager may prepare a supply for the future as well as his more affluent neighbour.

Potatoes.—Of all vegetables this is the most important. At the present moment the prospect of a heavy crop is encouraging, generally, although in some localities, owing to a long spell of dry weather at the end of May and during June, the prospect among the early and midseason varieties is not so good. The almost continual rain during the last fortnight, too, warns one to take all available precautions to preserve the later crops from disease as far as possible, because this is just the kind of weather to produce this pest. Any batches not sprayed should be gone over as quickly as possible with Strawsonite Bordeaux mixture dissolved in clear cold water at the rate of 20lb. to 100 gallons of water per acre. For a small patch in a cottage garden, an ordinary hand syringe will apply the mixture quite easily through a fine nozzle. Such an operation affords a splendid opportunity for co-operation in the purchase of the Strawsonite. The under side of the leaves is equally as important as the upper side, and so are the stems. Early and midseason varieties should be lifted, dried and carefully stored in sheds or in heaps, and protected from rain by a slight covering of straw, Bracken, dried grass and then a coating of soil. When putting the Potatoes in heaps, a small quantity of air-slaked lime is a good preservative of the tubers, and no doubt wards off disease to some extent. Smaller quantities can be stored in boxes. Those who do not spray the later batches directly

they see the first sign of disease in the leaves would do well to cut off the haulm quite close to the soil, as undoubtedly the disease penetrates the tuber through the stems.

Carrots, Beet and Turnips should be left in the garden until fully grown, but not afterwards. They are easily stored for months in sand in a shed or cellar, or in the open, protected from too much wet and frost. If sand is not available, they can be massed in a heap and covered over with any light material underneath a thick coating of soil.

Couve Tronchuda and Celeriac may be treated in a similar manner, but not in such quantities as the foregoing kinds.

Parsnips keep best where growing until quite late in the spring; in fact, until new growth in the leaves is on the move, when they should be lifted and stored in sand in a damp situation. Should early frost take place in the autumn, cover the crowns with soil 4 inches thick to preserve that portion of the root exposed by the growth of the leaves.

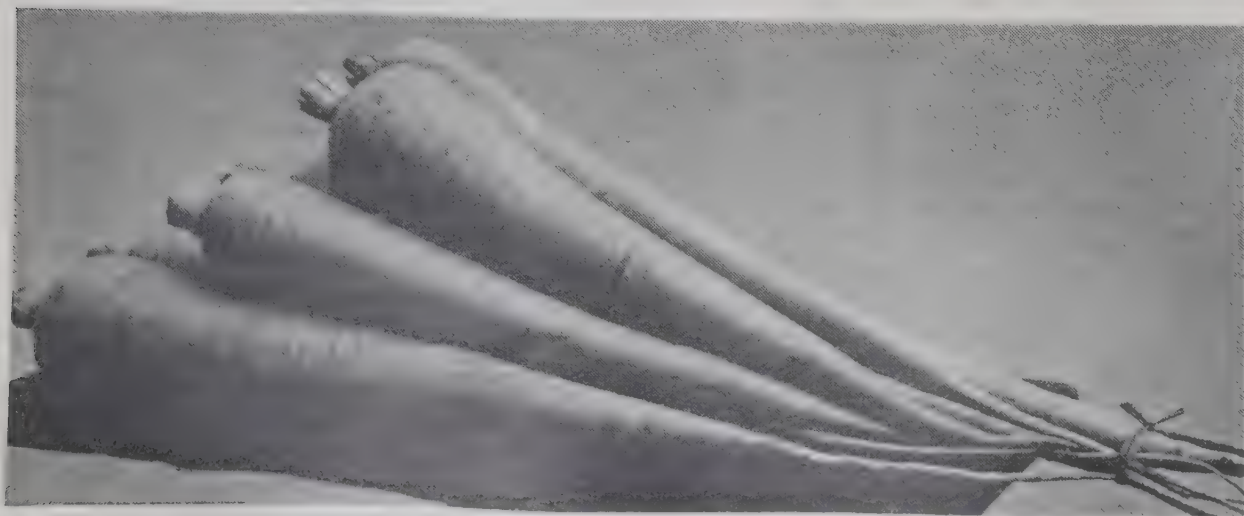
Leeks keep best where growing, except, perhaps, those matured quite early for exhibition. These, when growth is complete, should be lifted and stored in a dry place with moist soil about them, still retaining their roots.

Celery will come under the same category as Leeks, keeping better where growing as long as the hearts are protected from excessive rain; this, when followed by frost, is the principal cause of decay.

Vegetable Marrows can be preserved over a long period, and as they are plentiful this season they afford a good opportunity of prolonging a supply. When the Marrows are fully grown and before they become hard in the skin, they should be cut and hung up in a cool, airy shed. The time to cut is best ascertained by inserting the thumbnail in the skin of the Marrow near the stalk, if it penetrates easily, they should not be cut. The larger fruits, as Long White, Green and Cream, should be allowed to grow to their full size and mature fully. These will keep in a dry room for months, and can be made into jam or used for pies at will.

Cabbages, when nearing maturity, should be half pulled up, severing a portion of their roots in the ground. This will check growth and prevent them running to seed.

Cauliflowers, as they approach maturity, should be pulled up, standing the roots in water in a cool shed or behind a south wall, where they will keep fresh for some time.



CARROT NEW RED INTERMEDIATE. CARROTS MAY BE STORED FOR MONTHS IN SAND IN A SHED OR CELLAR. SEED SHOULD BE SOWN NOW.

Salsify and Scorzonera should be treated in the same way as Carrots and Beet.

Runner Beans may be induced to bear longer by removing the Beans as fast as they grow to their full size and before they form seed, and thus relieve the plant of an undue strain. If the plants can be protected also from early frost, so much the better. The Beans are best preserved by standing the stalks in water, and although they may not last long, a few weeks saved may be useful.

Jerusalem Artichokes should be left in the soil until required, as they keep better there than anywhere until new growth commences in April.

Globe Artichokes ought to be cut directly they attain full size and before they harden. Stand the stems in water in a cool shed or under a wall away from the sun's rays.

Onions must be carefully handled. Directly the tops exhibit signs of maturity, they should be pulled up, laid thinly in the sun to thoroughly ripen, and then be suspended in ropes or singly from the under side of the roof in a cool shed, or be spread thinly on a boarded floor. The early growing Tripoli varieties may be longer preserved than ordinarily by pulling them up directly their full growth is assured, removing the slightest sign of decayed skin and giving them an airy position.

Cucumbers keep best placed in a box one layer thick on green Nettles and buried 1 foot below the surface.

Rhubarb is best made into jam when fully matured in its growth.

With regard to the growth of such crops as Brussels Sprouts, Savoys, Broccoli, Kales and other winter vegetables already in existence, these should be encouraged to grow to their fullest extent by keeping them free from weeds and constantly stirring the soil.



BROCCOLI CHRISTMAS WHITE. BROCCOLI, CABBAGE, SAVOYS AND KALE ARE VALUABLE WINTER CROPS, AND MAY BE PLANTED NOW.

Sowing and Planting.—Every available piece of ground between fruit trees should be planted with Cabbage, Coleworts, late Savoys and Kales. Quantities of Spinach, Onions, Carrots, Turnips and so forth should be sown without delay among Strawberries or on any vacant places; even flower-beds might be extemporised for such crops as are still available by planting and seed sowing. Appearances in the garden are of little avail in case of such dire necessity as we may be put to in the near future, when sentiment avails but little.

The preserving of such vegetables as Peas, Kidney Beans and green Tomatoes in bottles, too, should not be forgotten. E. MOLYNEUX.

Swanmore Park, Bishop's Waltham, Hants.

HOW TO PRESERVE FRUIT WITHOUT SUGAR OR ANY SPECIAL APPARATUS.

Materials Needed in Readiness.—Boiling water sufficient to fill the fruit bottles. Clarified mutton fat, melted and ready to use. (Put this in a jar, into the oven, while the fruit is cooking.) Vegetable parchment covers to fit over all the bottles, and fine strong twine cut into lengths to tie down each jar quickly.

Method.—Gather the fruit on a dry day, and, having provided clean teacloths, very carefully wipe the fruit, laying aside any that are over-ripe, split or in any way imperfect. Place the clean, dry fruit gently in perfectly clean, dry, wide-mouthed bottles or jars, such as old French Plum bottles, good sound glass jam jars, &c. (but do *not* use any that have contained pickles or vinegar). After filling the bottles with the fruit, gently turn and keep patting the bottles. In this way the fruit settles down, so that you will find you can add some more fruit to each jar after it is apparently quite full. Next stand the bottles in an open vessel, such as a large fish-kettle or any large saucepans, &c., and put clean straw, hay or rags between the bottles to prevent them from shifting while cooking. Fill the large vessel with cold water till it reaches to about two inches or three inches below the tops of the jars. Let it gradually boil up, and keep it boiling till the fruit at the bottom of the jars just begins to show signs of cracking. Then ("I can't be interrupted to speak to anyone, not even the Queen if she should chance to call") fill the bottles with boiling water from the kettle, thoroughly covering the fruit (as it often soaks up a little of the water), and carefully and quickly add just enough of the melted fat to entirely cover the surface of the water.



ONIONS SHOULD BE WELL RIPENED BEFORE STORING, TAKING CARE NOT TO BRUISE THE BULBS. THE VARIETY RECORD IS HERE ILLUSTRATED. SEED SHOULD BE SOWN NOW.

Tie the vegetable parchment covers over the jars instantly. Set the jars to cool, and wipe every one before storing, in case any of the fat should be on the outside. Store on cool, airy shelves. Fruit preserved thus will keep good for twelve months.—ANNE AMATEUR.

BOTTLING LATE FRUITS.

MUCH has been written from time to time on this important subject by far more able pens than mine, and I do not for one moment pretend to teach experts the best way; but with every appearance

of serious times in front of us it behoves each man to do his best both to prevent waste and make every preparation for the future. For many years my good wife has taken much interest in this direction, and I venture to say that in some cases many fruits which she has preserved in this way are equal, and even in some cases superior, to fresh fruits. Especially does this relate to Plums, Damsons and Morello Cherries. Fortunately, it is by no means necessary to have the best varieties for this purpose; indeed, some of the smaller and more common sorts of Plums are to be preferred to the choicer varieties for this purpose. Damsons, for instance, are among the most simple to preserve, and when properly done the true Damson flavour is much more pronounced after six months than when freshly taken from the tree. Where heavy crops of Plums abound, fruits which are even not yet ripe may be thinned and bottled with much success.

Pears.—With the heavy crop of this fruit in many parts of the country, and with the short time many varieties will last when ripe, means should be taken to preserve them. Nearly all varieties will lend themselves to it. The small ones may be peeled and bottled whole, and the larger ones cut into quarters. These make a very wholesome and appetising dish when stewed.

Morello Cherries.—Though these are not nearly so largely grown as many other fruits, few things are more appreciated or more delicious after being bottled, and can be served up in many ways.

Another important fruit which should not be overlooked, and which is within the reach of most of the poorer among us, especially those in the country, is

The Common Blackberry, which finds favour when nicely cooked with both rich and poor alike.

Rhubarb, though not strictly a fruit, is generally included as such in fruit-bottling classes, as it naturally ranks as a fruit dish on the table. By choosing the younger leaf-stalks and cutting

them into suitable lengths, these preserve well and will answer splendidly for making fruits and tarts during the winter months.

Bottling the Fruits.—There are many forms of special bottles manufactured expressly for this purpose, the majority of which are particularly well adapted. Always select those which will have nothing but clear glass next to the fruit after being screwed down. Medium-sized bottles are to be preferred to the larger ones, as the contents will not keep for any length of time when once opened. Select sound fruits which are rather under than over ripe, and these should be graded. Pack evenly and firmly into the bottles till within a short distance of the top; the fruits should be covered with cold, clean water, leaving a small

of the vessel when the bottles are being heated to prevent them coming into direct contact with the heat. EDWIN BECKETT, V.M.H.

JAPANESE MAPLE AND CAMPANULA PELVIFORMIS.

JAPANESE MAPLES are very slow in growth, but they spread out into dense heads and have a fine appearance when well placed. They may be recommended especially for small gardens, as the several varieties occupy but little space and contribute a rich scheme of colours, from deep crimson to light green. To give an idea of the slowness of growth, I may mention that the plant shown in the accompanying illustration has been in its present position for thirty years, but is still under six feet in height. It is a specimen of *Acer polymorphum dissectum*, with leaves most elegantly cut to such an extent as to give it the appearance of some delicate Fern rather than a Maple. The colour of the foliage is deep reddish bronze, which is especially bright and conspicuous during the early summer. The slender branches are of an elegant drooping, almost weeping, habit, and it is a gem for the foreground.

The colours of the Maples are very effective, varying from light green and golden yellow to all shades of red, bronze and dark purple, while in the autumn many kinds assume a bright scarlet, which is retained during several weeks before the dropping of the leaves. Another strong point in favour of these Maples is their extreme hardiness. Even in the North they flourish without protection during the winter. All they need in exposed localities is a little shelter in the early spring from cold or boisterous winds, which might damage the young foliage before it is fully developed. Owing to the dwarf character of their growth it is very necessary when planting to place them in a prominent position, as, unless they come directly under the eye, the beautifully formed leaves and the exquisite markings are not seen to advantage. Arranged in bold groups, the brilliancy of colouring for which these Maples are so remarkable in the autumn is a striking and uncommon feature.

Campanula pelviformis is said to be a variety of *C. carpatica*, but it is sufficiently distinct to be treated as a species. It is one of the most attractive forms known. Instead of the well-known flowers of *C. carpatica*, the large blossoms of *C. pelviformis* are deeply saucer-shaped in form, and carried on freely branching stems that are about a foot high. It should be found in every collection of hardy plants, for it is certainly one of the best of its class, and both compact and free-flowering. The blossoms, which are about two inches across, are pale lilac. The seedlings rarely approach in any degree to the parent plant, but revert to the *C. carpatica* type. WYNDHAM FITZHERBERT.



A BEAUTIFUL JAPANESE MAPLE IN ASSOCIATION WITH CAMPANULA PELVIFORMIS.

air space of about half an inch. The rubber ring ought then to be placed on, and next the glass top. Finally screw down the collar tightly. The bottles should be stood in rather a large pot or boiler specially made for the purpose, which ought to be stood on a fire or a gas stove, allowing the temperature to rise slowly to about 160° Fahr. This will take about an hour and a-half. It can easily be tested by the thermometer, after which allow them to cool down gradually, when the bottles may be placed in a dry, cool store cupboard, where the fruits will keep for months and, indeed, in many cases for years. It is well to place a large plate or small dish at the bottom

HARDY HIMALAYAN PRIMULAS.

(Concluded from page 412.)

P. sikkimensis (Hook.).—Another well-known plant is *P. sikkimensis*, which is quite hardy, but which many find short-lived in gardens. It is a lover of moisture, and in its native habitats chooses marshy situations. It seeds freely and comes readily from seed, so that it is easily retained, even in places where the old plants die off. It needs no description, and its tall stems, bearing their abundant fragrant, light yellow flowers, please everyone. As the name would indicate, it comes from Sikkim, where it is found at an altitude of from 11,000 feet to 15,000 feet. *P. sikkimensis* belongs to Watt's section *Purpurea* and Pax's *Nivalis*.

P. Stuartii (Wall.).—The true *P. Stuartii* from Thibet, Kashmir, Chamba and Sikkim has yellow, perfumed flowers; but much confusion has arisen between it and *P. purpurea*. *P. Stuartii* has the leaves minutely serrate, those of *P. purpurea* being almost entire. It is usually found in wetter places than *P. purpurea*, and in cultivation prefers a good supply of water. It is a handsome plant, with lemon yellow flowers on long, spreading petioles. It belongs to Pax's *Nivalis* and Watt's *Purpurea*.

P. Wattii (King).—A beautiful little plant, which with me has not proved hardy. It belongs to the same section as *P. Reidii*, and requires much the same treatment. The drooping flowers are of a fine dark purple colour. It was introduced into this country some little time ago, and when first shown in London by Messrs. Gill it caused quite a sensation, people failing to recognise it.

P. Winteri (Gill).—This is synonymous with *P. petiolaris* var. *pulverulenta* of Hook. f., but Mr. W. G. Craib is of the opinion that it is a good valid species, and that it should not be considered as a variety of *P. petiolaris*. With this conclusion most of those who know the plant will agree. It is a handsome species, with very farinose leaves and pretty rose lilac flowers. It has not been much tested outside, and has generally been cultivated in pots in a cold house, for which it is well adapted. It is well worth growing for the sake of its beautiful mealy foliage, apart from its flowers.

Morelands, Duns.

JOHN MACWATT.

A BEAUTIFUL JAPANESE GUELDER ROSE.

VIBURNUM PLICATUM is the sterile form of the Japanese Guelder Rose, *Viburnum tomentosum*, and one of the best, if not the best deciduous flowering shrub in the genus. The illustration is sufficient evidence of its free-flowering qualities. It forms a spreading bush 5 feet to 8 feet high, with prominently ribbed green leaves, which are almost hidden in June by the pure white flowers. These are borne in globose inflorescences, 2 inches to

3 inches across, not unlike our common Snowball Tree; hence the popular name of the Japanese Snowball Tree is frequently used. As a lawn specimen or a group of six to a dozen plants in a large bed and massed in a border, nothing could exceed this *Viburnum* in beauty when in blossom, rising like a mound of snow from a green carpet. *V. plicatum* was first introduced by Fortune in 1844. A second variety, *Mariesii*, is also a good garden plant for sheltered positions, its behaviour suggesting that it is not quite so hardy as the subject of this note. Cuttings made of the half-ripe wood root readily in late summer in a propagating-frame with slight bottom-heat, or on a gentle hot-bed. Layering is also an easy method of increase. *V. plicatum* luxuriates in a rich loamy soil. Mulching with decayed manure in June, liberal supplies of water during dry weather, with occasional applications of liquid

Kew in a bed of the Mediterranean Heath. At home, in South America, *E. pinnatifolia* is an evergreen, but during a severe winter with us many of the leaves turn brown and fall before the new ones push in spring. It belongs to the Rosaceæ family, and the large white flowers, 3 inches across, with a central mass or rosette of stamens, may be compared to a choice single Rose. The most suitable soil appears to be sandy loam in which leaf-mould and peat have been freely worked. *E. pinnatifolia* is without doubt one of our choicest August-flowering hardy shrubs.

ASCLEPIAS DOUGLASII.

This hardy perennial, though introduced into this country in 1846, is little known in gardens, in proof of which it may be mentioned that in the last sixty volumes of *THE GARDEN* only one



JAPANESE GUELDER ROSE OR SNOWBALL TREE (*VIBURNUM PLICATUM*.)

manure, all assist in producing a picture such as the one shown.

A RARE CHILIAN SHRUB.

ALTHOUGH introduced about fifty years ago, *Eucryphia pinnatifolia* is still a comparatively rare plant. It seems to thrive best in a half-sheltered spot where the shrubs get plenty of light but are sheltered on hot, sunny days. Another requisite appears to be moisture and cool conditions at the roots, for though the ground must be well drained, it is rather noteworthy that usually the best specimens are those surrounded with low-growing shrubs some 2 feet to 3 feet in height. The conditions named can perhaps be most readily supplied in the South and West, where good specimens may be noted. At Wisley two noble specimens are flowering profusely at the present time, while others are to be seen at

note on it, a few lines in length, occurs. It is, however, a handsome plant, worthy of culture for its foliage alone, while its sweet-scented blossoms render it desirable. In Nicholson's "Dictionary of Gardening" its height is given as from 2 feet to 3 feet. The entire leaves are 1 foot in length and 4½ inches in breadth, and the plant, when it has attained its fullest dimensions, has a very noble appearance. It flowers in August, bearing numerous heads of small blossoms, some of the bloom-clusters having a circumference of 12 inches. The globes of flower, when all the blossoms are fully expanded, appear of a faint flesh pink colour at a little distance. The reflexed petals are of a dull reddish hue, and the corollas, which are less than half an inch across, are of a yellowish tint. Over two hundred blooms are often carried on a single flower-head. As has been said, the blossoms are perfumed, and innumerable humble-bees are attracted by the scent to the bloom

heads, where they soon lie prone, intoxicated with the nectar. The plant is a native of Western America and is a very strong grower, spreading by underground stems. If a specimen is shifted, any little portion of the roots that may be left throws up growth in the spring. A better-known species and the showiest flowerer of the race is *A. tuberosa*, which bears flat umbels of brilliant orange scarlet flowers on stems about 2 feet high. It will not succeed in heavy soil, but in light ground and in full sunshine it should do well.

Kingswear

W. F.

A BEAUTIFUL ROCK ROSE.

CISTUS LORETII is one of our best Rock Roses, and is a hybrid between *C. ladaniferus* and *C. monspeliensis*. It forms an attractive evergreen bush 3 feet or more in height, and, being of a spreading habit, usually exceeds its height in



CISTUS LORETII, A HARDY AND FREE FLOWERING ROCK ROSE.

diameter. The leaves are small—1 inch to 2 inches long—and the flowers are in terminal clusters of three to five blooms, white, with a crimson blotch at the base of each petal. The flowers are 2 inches or rather more in diameter and, in common with other Rock Roses, open in the morning and shatter before night. There is little evidence of this failing, however, as the bushes continue to produce a profusion of blossoms in succession throughout June and July.

It is worth noting that the flowers of *C. loretii* remain open for a portion of the afternoon, whereas most Rock Roses shatter about midday. This is one of the hardiest *Cistus*es, and must be included in a selection of the best six for garden decoration. The Rock Roses delight in a well-drained sandy soil and warm sunny positions on sloping banks or at the foot of a south wall or fence. Cuttings root readily in autumn in a cold frame or under a handlight, and artificial heat is not desirable.

A. O

HOW TO INCREASE THE FOOD SUPPLY.

THE Royal Horticultural Society is doing an excellent work in bringing to notice the various ways in which our supplies of vegetables may be maintained throughout the coming months. Happily, our supply for the time being is all that can be desired, but the question which calls for immediate attention is the sowing and planting of vegetables for future use.

At Wisley every square foot of available land is being cropped, and surplus seeds have been distributed among cottagers in the neighbourhood. This worthy example has been followed in many towns and villages throughout the United Kingdom. We know of many places, particularly in the

vegetable in the form of Turnip tops. For some unknown reason garden Swedes are not very extensively grown, but wise country folk well know that the Swede is a better vegetable for cooking in the winter than even the Turnip. Moreover, Swede tops may be used for cooking in the same way as Turnip tops, while the cultivation of the two vegetables is similar.

Carrots.—The varieties most recommended are Shorthorn and Intermediate. It is not to be expected that they will make a large size, but they may be allowed to remain in the soil and be drawn at any time in the winter, while in favourable soils and situations early roots may be drawn by the end of September or early in October.

Beetroot.—If sown at once, and given a favourable autumn, a yield of fair-sized bulbs may be expected in about ten weeks. Only the Egyptian or Turnip-rooted variety should be sown.

Onions.—In view of the fact that large quantities of Onions are annually imported from the Continent and Egypt, it is not unlikely that our supplies will be short, and already the market prices are high. All Onions are hardy, and it is a common practice to sow about mid-August, so that the plants are forward enough to be useful before winter. Tripoli Onions are specially recommended for sowing at the present season, and the bulbs may either be drawn in winter or allowed to stand until the spring. Onions require a rich and deeply worked soil. Light soil should be trodden over to consolidate it before the drills are drawn.

Leeks.—It is not too late to plant out Leeks, and these might be lifted at any time in winter.

Cabbage and other Winter Greens.—These provide the most important of all the winter crops. The main batch of spring Cabbage should be planted without delay and surplus plants distributed. Plant closer than usual to economise space; when cutting in the spring, every alternate plant may

be removed, giving room for others to develop. After planting, it is a good plan to cover the surface with finely sifted coal ashes as a preventive measure against slugs. Sprouting Broccoli, Savoys, Kales—especially the Russian Kale—and Coleworts should all be planted now to yield valuable crops all through the winter and spring. Any open piece of ground will suffice, even between permanent crops of small fruits, provided it is deeply dug and not exhausted by previous crops.

Winter Spinach.—On light soils and in country districts, away from the evil effects of town fogs, this acceptable vegetable may be sown until the end of September. When small, the plants may be drawn to make room for others to develop. It is a mistake to remove the leaves before the plants have attained a fair size. Keep the soil well stirred between the rows; give an occasional dusting with soot to clear the ground of slugs and, at the same time, assist the plants in making growth.

county of Surrey, where committees have been formed, and vacant land has been, and is still being, brought into cultivation. The committees are doing admirable work, not only in the distribution of seeds and garden tools and in the securing of suitable plots of ground, but also in giving useful work to many who would otherwise be unemployed. This work is of the greatest national importance, and there is no time to lose, as the season is not far distant when vegetative growth will cease for the year. The following is a list of vegetables which may be sown or planted now, and many of them, it may be observed, would be ready for use in less than two months.

Turnips and Swedes.—Such varieties of Turnips as will keep—for example, Red Globe and Golden Ball—are recommended for sowing at the present time. They may be sown both in heavy and light soils, and if grown in the latter should be ready by the middle of October. If allowed to stand for the winter they make a most useful

GARDENING FOR BEGINNERS.

MELONS IN HOUSES AND FRAMES.

AMATEURS who are successful in the cultivation of Cucumbers often fail to grow Melons satisfactorily. Of the two the latter are the most tender, but failure is frequently the result of undue coddling. The young plants are subjected to excessive heat, the stems and leaves are rendered quite delicate, and then, when the time comes to stop hard firing and to admit more air, the plants fail. A medium course is best. The plants mostly collapse when the fruits are beginning to net prior to the ripening stage, so that, practically, the whole of the work expended on them is useless.

Plants bearing fruits in an advanced stage now should be closely watched. Maintain the soil in an even state as regards moisture, giving manure-water immediately after clear water, and in sufficient quantity to well moisten the whole of the soil in the bed and almost close up to the stems of the plants. I do not think I have ever lost a Melon plant through watering, and when giving clear water I always poured it on the soil close up to the stems of the plants from the seedling to the ripening stages. Manure-water was kept about two inches away from the stems. Amateurs of little experience, however, would be well advised to refrain from wetting the soil nearer than 2 inches to the stem of the plant. All young shoots that are regarded as surplus ones must be pinched off—not cut—while very small; then there will be no risk of the stems damping off.

Melons, unlike Cucumbers, thrive best in a fairly heavy loam, and when planted in the latter and top-dressed with that of a similar nature the plants rarely collapse; but they often do so when grown in a very light, sandy mixture. As long as the foliage is free from insect pests it is not advisable to syringe it. Judicious ventilation at the top of the house only until the fruits begin to ripen, and plenty of floor moisture, will be all that is required. While the Melons are actually maturing on the plants, open top and front ventilators, but damp the path or floor of the house as much again while they are open. Admit a little air through the top ventilators all night, but cease damping the floors at five o'clock in the afternoon. Plants in frames require less damping and less watering than those in houses. Very great care should be taken to remove surplus shoots while small, and so avoid overcrowding. Dispose the main stems thinly over the bed surface; then ventilation, without causing direct draughts, will be more effectual. Raise the half-grown fruits on blocks of wood or empty flower-pots.

AVON.

HOW TO IMPROVE GROUND FOR VEGETABLES.

EVERY year new plots are dug up and cropped with vegetables. In some instances the newly broken soil is very good, and does not need much labour to bring it into a good condition for yielding first-rate crops; but in the majority of cases a good deal of labour is needed and much care in the working of the soil and the application of manures. There is no time better than the present for "taking stock," as it were, of the real state of ground

which was broken recently and cropped for the first time this summer. Another ordinary digging or trenching would much improve it, but the cultivator must lose no opportunity to get the soil into the best possible condition. In no case must the clayey subsoil be brought to the surface and mixed indiscriminately with the top layer for at least three years. At the end of that time, through yearly tillage, the soil to a considerable depth will be vastly improved, and some of the subsoil may then be mixed with the surface portion.

In many gardens there is a clayey soil and also a light one. In such cases the cultivator should, while carrying out trenching work, throw out spadefuls of the clayey subsoil at every few yards as the work proceeds, wheel it away to a corner of the garden, tip it down in rough heaps, and leave it there for the frosts and weather generally of winter to act upon it. One turning may be advisable about the end of January. By the end of April the stiff loam will be in a pulverised state and very suitable for mixing with lighter soil. The soil which is added must be kept near the surface, not buried, then it will still be under the influence of the weather. Rotted manure may be mixed with the clayey portion of the soil in the autumn, and with the lighter portion next February. The pulverised clayey soil would be splendid for Roses. In the heavy soil Broad Beans, Cabbages, Cauliflowers and winter greens may be grown; and in the lighter soil Dwarf Beans, Peas, Beet, Celery, Potatoes and Carrots may form the principal crops. By judicious treatment from year to year the soil would be so much improved and enriched that very heavy crops could be obtained from it at a low cost as regards the tillage.

GAILLARDIAS.

WHEREVER this very showy herbaceous plant is once grown it is always grown, for by experience its several distinctly good points quickly reveal themselves. It is, for instance, practically weather-proof, a most valuable advantage, in view of the varying meteorological conditions which obtain in our land. Under the hottest sun, when, maybe, other plants are apparently lifeless, or thereabouts, Gaillardias are in perfectly happy mood, raising their brilliant heads of colour well up on straight, stiff stems, as though oblivious to such things as variations of temperature. Heavy rains seem to affect them just as little.

Few flowers can equal them as cut blooms, and on this account they are favourites for home decoration purposes. They need, of course, to be gathered young, *i.e.*, before the ring of petals has become quite flat. As exhibition subjects, too, they are invaluable, and if given reasonable time soon recover after a journey. The plants possess, however, one eccentricity, especially those more than a season old. They sometimes throw up quite good and healthy ground growths, but without flower-spikes. In order, therefore, to obviate such a disappointment occurring, as well as to increase one's stock of plants, now is an opportune time to lift any clumps that may not have flowered, dividing out the rootlets into light soil a few inches apart. Growth emerging from flowering plants may, of course, be treated similarly. It is well to mark the spot, because frequently the leaves die quite

away; but this should not be taken as a sign that the roots are dead. In due time they will spring up. Apart from a dressing of some insecticide, soot or lime, no further attention will be necessary until removal in spring to more permanent quarters in the border, either singly or in clumps of three or four, the latter giving a bold effect.

B. W. LEWIS.

BEDDING VIOLAS OR TUFTED PANSIES.

CHARMING alike to form a carpeting for taller plants or to provide masses of colour by themselves, the above are now deservedly popular not only in the large private establishments, but also among amateurs. Undoubtedly, a great point in their favour is their adaptability to both climate and soil, though probably the ideal soil is one of a light, sandy loam to which some well-rotted leaf-soil has been added. The position for planting, if possible, should be an open one, more especially when the Viola is used in a bedding scheme, as it tends to retain its compactness of growth better than when in a shady position.

The propagation of the Tufted Pansies is simplicity itself, and can be successfully accomplished without the aid of glass at all, although, of course, where a cold frame is available, so much the better. To obtain a good supply of suitable cuttings at the present time, some of the plants should be cut back when decaying flowers are removed. This will at once encourage plenty of young growth in the centre of the plants, and if a little finely sifted soil has been previously given, all the better. Should these have to be inserted out of doors, a nice sheltered spot, where it will be an easy matter to constantly spray overhead until roots are formed, should be selected, and also where (assuming they are to remain there until spring) they are as little exposed as possible to unfavourable weather.

If possible, the cuttings inserted outside should be put in by the end of the first week in August, but where frames are available, any time up till the end of September will do. In each case a light soil should be prepared and made moderately firm, an inch of sharp sand being placed on the surface before the cuttings are inserted.

Another ready means of increase is to split up the plants during October, and they can then be replanted at once, care being taken that each portion has sufficient roots to enable it to make another start. It is essential for plants in frames to be exposed as much as possible and, after the cuttings are struck, gradually hardened, the lights being kept off except during times of severe frost and heavy rains. The young plants outside can be protected by dry leaves, Bracken or mats.

There are many excellent varieties to choose from, but the following are a few which can be relied upon: Purple—Archie Grant and William Daniels; light blue—Maggie Mott, Sir Robert Pullar and William Robb; white—Purity and Lady of the Snows; lavender—Kitty Bell and John Young; blue—Campbell Bannerman, True Blue and Admiral of the Blue; violet—Bluebell; yellow—Sydney, Lord Kitchener, George Palmer and Primrose (lemon yellow).

Scribby Gardens, Bawtry.

H. TURNER

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruits Under Glass.

Peach and Nectarine Trees in pots which are intended for early forcing should be carefully examined, and all that require repotting may be attended to at once. The soil for this purpose should consist of rich turfy loam and a little decayed manure, with a good sprinkling of sifted lime rubble to keep the roots in a healthy condition. The pots should be quite clean and not too large. Pot firmly and give a good soaking of clear water as soon as potting is finished. A little crushed bone may be mixed with the soil with advantage. Stand the newly potted trees on a bed of ashes and secure them against strong wind.

Strawberry Plants in Pots will now require careful watering. Remove all side growths and keep the surface of the soil quite free from weeds. Pot up the remainder of the plants with as little delay as possible.

Early Hamburgh Vines.—All lateral growths may be removed from these Vines, and the shoots shortened in order to plump up the buds near the base of the spurs. Keep the ventilators fully open at night, and syringe the Vines in order to retain the remaining foliage as long as possible.

Plants Under Glass.

Tuberous Begonias which have been in flower for some time should receive frequent supplies of liquid manure with a view to lengthening the flowering period. Spring-raised seedlings will still benefit by potting, for, if once allowed to become stunted in small pots, many of the flowers drop before they are fully developed. Employ sufficient fire-heat to keep the air dry, and ventilate freely during warm days.

Calceolarias.—Do not allow these plants to become stunted in small pots or to become dry at the roots, as, no matter what the treatment may be afterwards, they will never present the same appearance as plants which have been grown without a check. Keep them in a cool pit and damp the pots and their surroundings frequently. Ventilate freely and protect from sun.

Carnation Souvenir de la Malmaison.—Young plants which were layered early in July will now be ready for potting into 4-inch pots. The compost may consist of good turfy loam and leaf-soil, with a good sprinkling of sifted lime rubble and silver sand. Pot firmly and place the plants in a cool house or pit.

The Flower Garden.

Propagating Bedding Plants.—This work must be accomplished with as little delay as possible, so that the young stock may be well rooted before the season is too far advanced. When sufficient *Pelargonium* cuttings have been secured, *Verbenas*, *Heliotropes*, *Coleuses*, *Iresines* and various other plants should be propagated, and for these a close, cold frame will be necessary. Let the cuttings be as stocky and short-jointed as possible, and select only such shoots as are free from flowers. When the cuttings are ready, they must be made firm in fine sandy soil, either in pots or pans.

***Anchusa italica*.**—Now is the proper time to secure a stock of this indispensable border plant, which is easily propagated by cuttings of the roots. Plants which have finished flowering may be lifted and the root cuttings prepared in the same manner as *Seakale*. They may be inserted in boxes of sandy soil with a propagating dibber and covered with soil. Place them in a close, cold pit until a fair amount of growth has been made.

Salvia patens may also be propagated now. Select short-jointed cuttings and place them singly in small pots. If kept in a close, cool pit they will soon make roots and the young tubers can be potted in spring. They will then make good plants for the mixed border in May.

Pentstemons are flowering freely this season, and the leading shoots should be removed as soon as they have finished flowering, in order to produce stocky cuttings for next season. Mrs. Fulford is a grand variety with long spikes of bright red flowers, and is worthy of extensive cultivation.

The Hardy Fruit Garden.

Apples and Pears.—Early varieties of Apples and Pears should be carefully gathered before they become too ripe, and placed in the storeroom. Later varieties which will keep for a time will be of great value this season, owing to the scarcity of foreign fruit; therefore these should be protected by netting, especially if birds are troublesome. Expose the fruits to sun by the removal of any leaves which overhang them. Any large single specimens may be secured to the trees by matting, and to secure their full development a watering with liquid manure may be frequently given. Plums should be often examined and the fruits gathered before they become too ripe, or many of them may split.

The Kitchen Garden.

Parsley.—Another sowing of Parsley may be made in a sheltered position for use during the spring, and where box frames can be placed over the crop during sharp weather. This is sometimes a useful crop during February and March, after which the frames may be removed for some other purpose. Early sown Parsley may be cut close to the ground now in order to produce a quantity of stocky growths for winter use.

Beetroot.—The earliest sown Beets should be lifted and stored in dry sand before they become overgrown, or the roots will be of no value. Later sowings may be allowed to remain in the ground for some time yet.

Tomatoes out of doors should have the foliage well trimmed, so that the crop may be fully exposed to the sun. Water freely with liquid manure, stir the soil about the roots, and top-dress with artificial manure previous to applying clear water.

Onions.—Many of the spring-sown Onions will be ready for lifting, and this should be done before the bulbs commence a second growth.

Cabbage.—Another sowing of Cabbage seed may be made now, as early sown plants sometimes suffer if they are too far advanced during the winter. Sow in an open position and prick out the plants as soon as large enough to handle. Flower of Spring, Milecross Marrow and Early Offenham are good varieties for this sowing.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Onions.—As a rule Onions are looking well, but owing to the recent unsettled weather they are much too green at this date, and in consequence of this second growth there is evidence of a good many thick necks. These growths should be checked as soon as possible by having the necks twisted to encourage the swelling of the bulb. Those that are showing signs of ripening ought to be pulled up and spread out to dry.

Tomatoes.—The young plants from seed sown at the beginning of the month should now be ready for potting on. It will be as well to pot them into the fruiting pots right away, just covering the ball, when a little soil can be added from time to time. Admit air night and day to promote a sturdy growth, and all laterals should be pinched out as they appear. When a sufficient number of fruits have set, feeding may commence and the temperature be increased somewhat.

Lettuce.—Another sowing of some of the hardier varieties may now be made, and as soon as they are large enough to handle should be pricked out into frames or pots which have been made up close to the glass, only protecting with the lights when there is danger of frost. This batch can, of course, be grown on outside for a time and afterwards transplanted into frames. This, however, must be determined by local conditions.

General Remarks.—With the recent showery weather there is sure to be an abundant crop of weeds appearing, and, if these are allowed to get ahead, it will be no light task to keep them in check. Every effort, therefore, should be made on fine days to get the hoe and rake at work. Continue to clear off all crops and vegetable matter that are no longer required, as these soon become offensive.

The Flower Garden.

Herbaceous Paeonies.—These, like many other herbaceous plants, resent frequent disturbance at the roots, nor is it necessary to replant them often, provided they are mulched with good manure and soil at least once a year. Where, however, the soil seems to be thoroughly exhausted, it will be wise to have them replanted, and this may be successfully done, provided extra care is exercised in lifting them. Should the weather be favourable for planting, there is perhaps no better time than the present to do this work.

Pentstemons.—Where a large stock of these brilliant summer-flowering plants is required, a start should be made at once to secure the necessary stock of cuttings. Some difficulty may be experienced in getting cuttings from some of the better varieties, owing to the cold weather we had in the early summer. If that is so, the flower shoots should be cut over, and in a very short time they will throw up quite a number of young shoots. These, if carefully managed, will root up to the end of the month. Although Pentstemons will root freely in a cold frame, it is important that they should be kept close for at least three weeks and shaded on bright days.

The Rock Garden.—During the early part of next month the rockery will require almost daily attention. It often happens in the stress of work that some of the smaller-growing plants have been crowded out by stronger-growing ones and are inclined to be lost sight of. Examine carefully a portion each day, removing the intruders that are smothering the weaker ones, and it is more than likely that the latter are almost exhausted for the want of moisture, owing to the position they occupy in the rockery. Continue to save seed of such as are required for increasing the stock. Such lovely specimens as the *Ramondias* cannot be too numerous, and in consequence all likely seed-pods should be secured.

The Hardy Fruit Garden.

Red Currants.—As soon as convenient after the crop has been gathered, the young growths should be shortened and the tops of the bushes thinned out so that light and air may reach every part of the bush. Carefully hoe and rake off all weeds and rubbish, and if the bushes are old, the surface should be mulched with some good farmyard manure.

Early Pears.—It is important to remember that some of the early varieties, such as Clapp's Favourite and Jargonelle, should be sent direct to the table, as these do not keep if stored. It will, therefore, be necessary to go over these varieties almost every day and gather those that are ripe. The best way of testing them is by lifting up the fruit, and if it comes away easily it is quite fit to be gathered; but on no account gather these early Pears until they are ripe.

Wasps.—A thorough search should be made for the nests, and have them destroyed by cyanide of potassium, as previously advised. Strange to say, it is at this late season that most destruction is done, not only among choice Pears outside, but among the equally choice Muscat Grapes under glass. Bottles containing sweetened beer will be found good traps.

Fruits Under Glass.

Late Grapes.—The later varieties will now be colouring, and it will be as well to have some warmth in the pipes, so that the top ventilators can be kept open during the night. Should there be an excessive rainfall, it will be necessary to protect the outside border to prevent the berries from splitting. Where this is at all possible, there is nothing better for this purpose than sheets of corrugated iron laid so that the water will drain away from the house.

Melons.—As this late batch comes into flower, no time should be lost in getting one or two fruits set on each plant. To ensure a quick growth, all laterals and surplus growths should be kept well pinched out. Guard against too much moisture at the roots, which would encourage canker; if this should be present, apply some lime to the affected part and ventilate more freely.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

ROSE-GROWING IN TOWN GARDENS.

IN these troublous days the national anxiety is likely to affect one's interest in the Rose garden, but to those whose part it is to remain behind, where brooding can afford no benefit, it is a relief to turn the mind to an occupation both beneficial and inexpensive. In the ordinary way many would now be leaving for holidays, and when this is the case it is necessary to have the plants in a well-cared-for condition before going away.

There is not a great deal which requires to be done, for at this period aphides have almost ceased to be troublesome, and caterpillars are met with less frequently. First and foremost, the trees should be carefully sprayed at least twice during the week before they are left, on the last occasion as near as possible to the time fixed for departure. Secondly, unless it is desired that others shall have the flowers while the grower is away, it is better to cut all the buds that are showing colour, as these will be littering the beds on his return, and their removal will assist the plants in forming stronger growths for autumn flowers. Lastly, the beds should have a final hoeing.

Now, while the colour effects are still apparent, is the best time for planning alterations in our Rose-beds. Many faults may be seen at present which in winter-time, with only our plans or labels to remind us of them, are apt to be overlooked. Where there have been, as sometimes happens, several failures together, one must endeavour to trace the cause, so that a remedy may follow. Occasionally one finds that certain beds are not favourable, and the reason may not be apparent until these are examined and dug over in the autumn. Insufficient drainage, want of lime, or soil that is too light, are among the most frequent causes of failure. But what will suit one variety quite well in the way of soil may prove detrimental to another that is equally free growing. A town grower must learn to recognise his limitations, and it is a wise plan to avoid giving up valuable space to those kinds which "might do better another season." If a fair start has been given them, Roses which will do well in his garden should already have proved their vigour of growth, if not their freedom in blooming. Those that have gone back or are otherwise unsuitable should stand condemned.

Every grower of Roses would delight in budding his own trees if only the means were at hand. Those who have space to spare for it should obtain a few Briars from a nurseryman during the winter months, but many are unable to find room for them. Possibly they might find enjoyment in trying just one or two, and it is not usually a difficult matter to find a spare corner at the back of a Rose-bed where these might conveniently be placed.

Briars for next year's budding may be obtained easily enough by planting an occasional "sucker," selecting those from dwarf plants preferably, as these can generally be put in with the root forming quite near the surface. It is not advisable to try to rebud standards which have failed, because the trouble is usually at the root, and a second attempt is as little likely to succeed as the first; but those who can bud successfully may have much better standards by planting the Briars and allowing them to remain undisturbed where they have been.

P. L. GODDARD.

TRIAL OF VIOLAS IN SCOTLAND.

DURING the years 1912-13 the Royal Horticultural Society made extensive trials of Violas in their experimental grounds at Wisley, Surrey, and the floral committee of that society made such awards to these plants for bedding purposes as seemed to them desirable. It occurred to Mr. Robert Fife of Messrs. Dobbie and Co., Edinburgh, that it might be desirable to have a repetition of these trials in Scotland for the purpose of ascertaining whether the characteristics of the various varieties shown in the South would be maintained in the North. Messrs. Dobbie and Co. accordingly put themselves into communication with the various growers who had sent plants to Wisley for trial, and the result was a whole-hearted co-operation to make the Scottish trial a success. The major portion of the Violas were contributed by Messrs. Dobbie and Co., and the firms who were good enough to offer their assistance were Messrs. William Artindale and Son, Sheffield; Messrs. Dickson and Sons, Newtownards; Messrs. J. Forbes (Hawick), Limited; Messrs. James Grieve and Sons, Edinburgh; Messrs. Lister and Son, Rothesay; Mr. W. H. Morter, City Gardener, Birmingham; Mr. Charles Turner, Slough; Messrs. R. Wallace and Co., Colchester; Mr. B. Wood, Liverpool; and Mr. G. Wood, Hawick, who all supplied the plants for trial free of charge. Altogether there were 229 varieties on trial.

The Violas, six plants of each variety, were planted early in April, and on the whole have made very satisfactory growth. Some old favourites, however, have not done so well in the trials as might have been expected, although in the ordinary nursery beds adjoining they appear in their usual good character. This would seem to show that to get a proper test a two years' trial, such as that conducted at Wisley, is absolutely necessary. The judging of the varieties took place on August 7, and the committee appointed was a particularly strong one, including such gentlemen as Mr. D. King, nurseryman, Edinburgh, president of the Scottish Horticultural Association; Mr. James Dobbie, a vice-president of the Scottish Horticultural Association and Superintendent of Public Parks and Gardens, Leith; Mr. Charles Comfort, The Gardens, Broomfield, Davidson's Mains, Midlothian, past president of the Scottish Horticultural Association; Mr. James Grieve, sen., Redbraes Nursery, Edinburgh, a well-known Viola authority; Mr. Matthew Todd, florist, Edinburgh, past president of the Scottish Horticultural Association; and Mr. James Whytock, head-gardener to the Duke of Buccleuch, Dalkeith, past president of the Scottish Horticultural Association. The following awards were made, * indicating the highest quality of bedding varieties, and † the next best for that purpose:

White.—* Mina, Swan, Virgin White and Alexandra. † Countess of Hopetoun, Purity, Queen of Whites and Snowflake.

Cream, sulphur or primrose.—* Lady Knox, Margaret Wood and Primrose.

Light yellow.—† Ardwell Gem and Greivii.

Deep yellow.—* Bute or Bute Yellow, Moseley Perfection, Queen's Park, Redbraes Yellow and Mrs. C. B. Douglas. † Lord Elcho, Kingcup, Royal Sovereign, Sunshine and Lizzie Paul.

Light blue.—* W. H. Woodgate. † Buxton Blue and Perdita.

Blue.—* Dairymaid and Royal Scot. † John Young, Mrs. Maclean and Ralph.

Mauve, lilac or heliotrope.—* Bridal Morn, Mrs. George Wood, Maggie Mott and Dumbryan. † Fred Williams, Kitty Bell, Mrs. Norris-Elye and Tottie.

Purple and purple-violet.—* Archie Grant, Eminence and Jubilee. † Rosy Morn.

Crimson.—* Arabella, Crimson King and J. B. Riding. † Amy Barr.

Rose or pink.—* Lady Clonbrock, Maid of Lorne and Tom Wilson. † Mrs. J. H. Rowland.

Edged.—* James Pilling, Harry Bamber, Waverley, Agnes Kay, Annabel Lee, Colonel Plumer and Jessie. † Thomas Bell, Mrs. Chichester and The Mearns.

Bronze.—† Bronze Kintore.

Violetta.—* Compacta alba, Lyric, Princess May, Violetta and White Dot.

Gracilis.—* Lutea and Purple Robe.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

DISEASE AMONG SWEET PEAS (Rosella).—The Sweet Peas sent are attacked by the wilt disease, due to the fungus *Fusarium vasinfectum*. No cure is known for this disease, and preventive measures should be taken another year in the direction of planting the Sweet Peas on a different site, liming the soil well, and giving a dressing of sulphate of potash. Flowers of sulphur dusted on to the soil might check the spread of the disease.

SWEET PEA STEMS FOR EXAMINATION (An Old Subscriber).—Sweet Peas usually suffer most from the root rot where the soil tends to hold water or is rich in organic matter. Those you send are badly attacked by the fungus *Thielavia basicola*, which is the cause of the trouble. See reply to "Rosella" for preventive measures.

POTENTILLAS (E. B. A.).—The genus *Potentilla* is a somewhat extensive one, and many species are of botanical interest only. Some of the indispensables are alba; alpestris, yellow; rupestris, white; Tongel, orange and crimson, one of the most charming; argyrophylla atrosanguinea; hopwoodiana, yellow, buff and carmine; nitida, pale yellow; Miss Willmott and Gibson's Scarlet, the finest of the red shades; and villosa, bright yellow. Apart from these are the hybrids of the florists' set, most of which are very free and profuse flowering. *P. chryso-eraseda* is a form of aurea. The other kind mentioned is not known to us.

TREES AND SHRUBS.

TREATMENT OF OLD HOLLY HEDGE (*M. P., Surrey*).—Your old Holly hedge should be clipped each year about the end of August. It is a good plan to remove all dead leaves from the hedge every few years. They may be shaken from among the branches by the aid of a stout stick and then raked up. After clearing away the leaves, give a good surface-dressing of well-decayed manure. A good watering with cow-manure water or fish manure dissolved in water may be given with advantage in May or August each year. Where dead places occur, remove the plants and as much of the old soil as possible; then fill the hole with good soil and repair the hedge with new plants in May or September.

ROSE GARDEN.

BLACK SPOT (*Taunton*).—The Rose is attacked by the fungus *Actinonema rosæ*, causing black spot. It is a troublesome disease to combat, but we think the best results are likely to be obtained by frequent spraying with Bordeaux mixture.

ROSE ALBERIC BARBIER (*C. E. F. M.*).—We have never known this Rose to sport. Probably the stock upon which it is budded had been previously budded with another kind. Your description sounds like that of *Diabolo*, and if you can send us a piece of growth and bloom, we could perhaps tell you definitely.

IMPROVING COLLECTION OF EXHIBITION ROSES (*R. E. T.*).—Of your list we should strike out *Lady de Bathe*, *Mrs. James Welch*, and perhaps *Melody*, as it is scarcely large enough for exhibition, and add instead *Mayflower*, **Ferniehurst*, *General-Superior A. Janssen*, *Mrs. E. Alford*, *Mrs. Wallace H. Rowe*, *St. Helena*, and **Heinrich Munch* or *Geoffrey Henslow* (*H.T.*). Those marked with an asterisk are not specially free blooming, but are fine, big Roses.

THE GREENHOUSE.

PRIMULA JAPONICA (*L. A.*).—Obtain and sow the seeds at once either in pans or boxes placed in a cold frame, where comparative darkness and uniform conditions would be assured. The species is of a moisture-loving nature, and the seed-pan should not be allowed to become dry. Fresh and good seeds usually vegetate freely and quickly. The firm you name would supply the seeds.

FERNS IN BOXES (*E. J. T.*).—Your better way will be to plant the Ferns in the boxes rather than to plunge the pots therein. Of course, there must be holes bored in the bottom of the boxes for the purpose of drainage, and over these should be placed a layer of broken crocks with the same object. The soil should be made up of equal parts of loam and peat, with a good sprinkling of silver sand. Suitable Ferns for such a purpose are *Adiantum decorum*, *Asplenium bulbiferum*, *Cyrtomium falcatum*, *Onychium japonicum*, *Osmunda palustris* and *Pteris cretica albo-lineata cristata*. We should not advise you to face the boxes with virgin cork, as it would afford such a harbour for insect pests of all kinds. Furthermore, you may, if you wish it, employ some plants of a drooping character, in order to drape the fronts of the boxes. Subjects suitable for the purpose are *Selaginella kraussiana*, *Panicum variegatum* and *Tradescantia zebrina*. The best time to plant your Ferns and the other things named will be in the spring.

TULIPS FOR CUTTING AND CONSERVATORY (*L.*).—Your question is somewhat vague, as you do not say if you wish to have the names of the ones for cutting grown under glass or outside. We take it you mean the latter. For conservatory decoration we recommend as singles *Vermilion Brilliant*, *White Hawk*, *Prince de Ligne*, *Mon Tresor*, *Prince of Austria*, *Rose Luisante*, *Couleur Cardinal*, *La Remarquable*, *Jenny and Wouverman*; and as doubles *Murillo*, *Schoonoord*, *Couronne d'Or*, *Safrano*, *Gladstone* and *Salvator Rosa*. To prolong the season these must be brought into heat in batches. Many lists divide the Tulips up into early and late flowering, so it is well to consult these so as to know which to bring in first. For cutting out of doors, nearly all varieties are suitable. Among the Cottage set, *retroflexa*, *Picotee*, *La Merveille*, *Mrs. Moon*, *Moonlight*, *Scarlet Emperor* and *Pride of Inglescombe* are among the best, and would give a succession of bloom. In the Darwin class there is very little to choose, as their general habit is so much alike. It depends on the colours that are wanted. The following six have good long stems, and are varied in colour: *Clara Butt*, *Euterpe*, *Fra Angelico*, *Pride of Haarlem*, *King Harold* and *Baronne de la Tonnoye*. As they are all cheap, they can be bought more largely than the expensive ones, and we feel sure will give satisfaction.

FRUIT GARDEN.

SMALL APPLES (*Hants*).—The little Apples are far too immature to enable us to identify the variety. The spots on them are due to the attack of the scab fungus. Spray now with half-strength Bordeaux mixture, and in the autumn prune out thoroughly all the diseased shoots you can find.

NECTARINE WOOD FOR EXAMINATION (*E. K. T.*).—The appearance of the piece of Nectarine wood sent suggests the tree is probably suffering from an attack of silver-leaf, due to the fungus *Stereum purpureum*. The leaves, if this is the case, would have a distinct silvery appearance, and when a tree is attacked it rarely recovers, and should be rooted out; but before you do this, perhaps you will send a leaf or two for our inspection.

MISCELLANEOUS.

CATERPILLARS ON BUSH FRUIT TREES (*K. S.*).—If the Currants and Gooseberries have no fruit upon them, spray with lead arsenate in the proportions recommended by the makers. If they have, pick off the caterpillars by hand.

VARIOUS QUESTIONS (*A. D.*).—1. Try dusting with lime (fresh slaked), or spray with paraffin emulsion. Do this about the second week in January. 2. The purple-leaved Plum, *Prunus pissardii*, or *P. cerasifera atropurpurea*. 3. They have been attacked by red spider. Spray in February or March, as soon as the pests appear, with an ounce of potassium sulphide in three gallons of water. 4. They are apparently becoming overripe.

PLANTING DAFFODILS (*Avon*).—The Privet is the oval-leaved variety, *Ligustrum ovalifolium*. The Shasta Daisies are varieties of *Chrysanthemum leucanthemum*. The end of November is very late for the planting of Daffodils and the other bulbs you mention, and though many are planted at that time, it is a fertile source of failure at flowering-time, for which only the planter is responsible. A better way would be to start the bulbs in pots, and put them into their positions when the Roses were planted. To keep them in the dry state would militate against success.

CRAZY PAVING (*W. G. W.*).—The stability and fixing of the stone depends upon its size, weight and thickness, and ordinarily heavy stone requires but little fixing. In the case of shallow stone or thin slabs of modern paving-stone, which is the least desirable of all, it would be better to bed the stone on good mortar and cement, leaving the joints free for plant-life. If not all were required for this purpose—whether they would be so required or not would depend upon the size of the stone—the stones could be arranged so closely that very little soil space would remain, and little inconvenience would be caused therefrom. We recently published an illustrated article on paved walks, but it concerned the correct planting more than the point you raise. We should only use cement for the joints in extreme cases.

TREATING A GARDEN (*New Recruit*).—Gardener No. 2 has given you the better advice, though it is highly probable that a garden which has so long remained uncultivated will take two or three years to get it into really good condition. Sandy soils usually are also hungry, and will take quantities of manure, and you might easily double the quantity of basic slag recommended and also that of the lime with advantage. Trench and manure the land as recommended, and apply the basic slag to the surface when that work is done. A little later on fork in the basic slag, and in early February apply a dressing of short manure to the surface and fork it in about a foot deep. You might apply a dressing of lime at the time the trenching is done, and another in the early part of the year, using about a bushel to each two rods of ground. You might apply a dressing of basic slag to the lawn in the autumn, and in spring a little nitrate of soda to encourage a freer growth.

SOCIETIES.

HIGHCLIFFE GARDENERS' ASSOCIATION.

ON Monday, August 10, Mr. G. Garner read a paper on "The Advance of Horticulture in the Twentieth Century." There was a good attendance of members. The lecturer gave a summary of the special work done of late in connection with horticulture generally, dealing with the development of artistic features, rock, alpine and water gardens, the herbaceous garden, the Sweet Pea, the Perpetual-flowering Carnation and other kinds of flowers now so prominent in our gardens. He also referred to scientific research, vegetables and fruits. In regard to the latter, he deplored the fact that so little advance had been made in regard to hardy fruits in orchards. There was a keen discussion by the members of the chief points raised, of the social position of gardeners and of their future prospects.

THE EDITOR'S TABLE.

A Blue-Flowered Plant from Bedford.—A correspondent who uses the initials "B. B." very kindly sends a flowering spray of *Cynoglossum amabile* from Kempston Hoo, Bedfordshire. This is a very charming plant, worthy of every encouragement, and has a more branching habit than other species that we know. Our correspondent writes: "I am sending a spray of *Cynoglossum amabile* in case you may not have seen it. It is, I believe, a new importation from China. Seeds were sown under glass last autumn, and the plants put out in the open border in May. Seeds were also sown in January, but these plants are not yet in flower. Though the individual blooms are small, the effect of the

branching sprays is very pleasing, and the colour is a good clear blue. Each plant has five or six sprays, mostly larger than the one I send. The height is 2½ feet. Seed seems to be setting very freely. I think this is a decided acquisition for the summer border."

International Sweet Pea Championship: Competition for the "Simplicitas" Trophy.

Owing to the Perthshire Sweet Pea and Rose Society's Show at Perth having been abandoned, the Boundary Chemical Company, Limited, Liverpool, have decided that under the circumstances the trophy will be competed for at Perth Show, 1915. The trophy for Wales at Carlisle Show, 1913, was won by Mr. T. Jones, Ruabon, and a gold medal has been forwarded to him in commemoration of the event.

Home-Grown Fruits and Vegetables.—In view of the special importance at the present time of securing that the home-grown supplies of foodstuffs are used to the best advantage in the public interest, with due regard to future requirements, the President of the Board of Agriculture and Fisheries has appointed the following gentlemen to serve as a consultative committee: The Right Hon. Sir Ailwyn Fellowes (chairman), Mr. Charles Bathurst, M.P., Mr. Charles Bidwell, Mr. H. Trustram Eve, Mr. S. W. Farmer, Mr. C. B. Fisher, Mr. E. M. Nunneley, Mr. Francis H. Padwick, Mr. George Scoby, Mr. G. C. Smyth-Richards, Mr. R. Stratton, the Hon. Edward G. Strutt and Mr. Christopher Turnor. The first meeting of the committee was held on August 10 at the offices of the Surveyors' Institution, 12, Great George Street, Westminster, to which address any communications may be sent to the joint secretaries.

Distribution of Surplus Plants.—An appeal to horticulturists, both owners of private gardens and market growers, is being made by the Board of Agriculture and Fisheries to preserve for distribution to allotment holders and cottagers their surplus stocks of seedling vegetables suitable for autumn planting in the district. These seedling plants, usually destroyed after the growers' own requirements have been satisfied, might, under present conditions, prove most useful. It is suggested that the owners of private gardens should distribute their surplus plants locally, either direct or through relief committees. In districts in which allotments are numerous, the owners of large gardens might be able, at little inconvenience or expense, to sow during this month Cabbages suitable for planting out in October, and so provide plants for those who themselves have no facilities for raising seedlings. Timely assistance in supplying plants would largely increase the comfort of cottagers in the coming year. Market growers who may have larger stocks of surplus seedlings than could be utilised locally are invited to communicate with the secretary of the Royal Horticultural Society ("Care of Food" Committee), Vincent Square, Westminster, S.W., who have generously placed their services at the State's disposal for this work. Although there are large stocks of food in the country, it is the duty of every occupier of land to avoid waste, and by forethought and consideration of the needs of others to alleviate the hardships that a rise in the price of foodstuffs will entail.

* * The Yearly Subscription to THE GARDEN is: Inland 6s. 6d.; Foreign, 8s. 9d.

THE GARDEN.

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AUGUST 29, 1914.

NOTES OF THE WEEK.

Our Planning and Planting Competition.—We take this, the last, opportunity of reminding intending competitors that September 1 is the last day for sending in Competition designs for the planning and planting of the little garden.

The Ordering of Bulbs.—To allay any anxiety that might be felt by our readers, we draw attention to the article under this heading on page 436. Shiploads of Dutch bulbs, including Hyacinths and Tulips, are already on their way to England. Early Hyacinths and Narcissi, forced for winter flowering, are largely obtained from France, and most of the English wholesale dealers have been able to secure ample supplies.

A Good Floral Combination.—When visiting a small garden recently, we were interested in a large group of the white Phlox Tapis Blanc, about one foot high, among which were mixed good plants of Lobelia fulgens Queen Victoria. The rich red flowers of the latter made a striking contrast to those of the Phlox, and an effect so easily obtained is worth recording for future use.

Blue Bonnet (*Scabiosa caucasica*).—This hardy herbaceous perennial is the largest and most handsome of the genus. Its large lilac blue flowers, which are 3 inches in diameter, are borne singly on long stems. It is of easy cultivation. The flowers, produced with freedom at the present time, are excellent for cutting purposes; they are of a soft, pleasing colour, with a graceful appearance, and last a long time in water. There are several beautiful varieties, of which *S. c. alba*, *S. c. magnifica* and *S. c. perfecta* are among the best.

The Value of Hardy Fuchsias.—Few plants can equal the hardy Fuchsias for giving a bold effect with so little trouble. As an isolated bed on the lawn or for massing in the wilder parts of the garden, they are all that can be desired. They commence flowering early in the summer and continue till well into the autumn. A large bed we have in mind has plants of *Gaura Lindheimeri* growing among the Fuchsias and is attractive most of the summer and autumn, the light, graceful branches of white flowers of the *Gaura* rising above the Fuchsia in a most attractive manner.

A Free-Flowering Adam's Needle or Spanish Bayonet.—A bold clump of *Yucca flaccida* continues to flower on a rocky bank in the Royal Horticultural Society's garden at Wisley. Here it is seen flowering to advantage, as it is not cramped for room and the spikes of bloom are shown up against a dense leafy background. This plant is of more slender habit, and certainly more profusely flowered, than the better-known *Y. filamentosa*, of which it is sometimes considered a variety.



THE NOBLE YUCCA FLACCIDA NOW FLOWERING AT WISLEY.

The Evening Primrose as a Cut Flower.—The value of the Evening Primrose as a cut flower is not sufficiently known. On the growing plant the flowers close and droop in sunlight and bright daylight, but in the shade of a room they remain all day in an open state, and nearly as good as on the growing plant in the early morning and evening. The other day we were admiring a tall glass filled with the beautiful *Oenothera lamarekiana* and a blue *Eryngium* or Sea Holly, and the two formed an

effective combination. Although they had been cut nearly a week, they were still looking quite fresh.

Increasing Anchusas.—For the most part these effective blue flowering plants will have passed out of flower. Any time after this date the old stools may be lifted and the thickest of the roots cut into lengths of about five inches (as is done with Seakale). Lay these in boxes of sand and winter them in a cold frame, when by springtime they will have formed crowns. Seed

sown germinates freely, but the colour varies so considerably that the root cuttings are generally supposed to be best. The varieties *Pride of Dover* and *Opal* have been much admired this year.

New Sources of Potash Manures.—This country's supply of artificial potash manure comes almost entirely from Germany. The existing stock is very small, and no further importation is possible for the present. The chief natural sources of potash immediately available are (1) seaweed, and (2) weeds, prunings, hedge clippings, brushwood, leaves and vegetable refuse generally. Seaweed is already extensively used as a manure on the coasts. All who have access to this source of supply should collect it in quantity. Broad weed may be used direct as manure. Grassy weed and tangle should be dried and burnt wherever possible. A ton of fresh weed should yield 20lb. to 30lb. of potash (enough, for example, to manure from a quarter to half an acre of Potatoes).

Mignon Dahlias.—In many cases there is a stunted or unnatural look about "dwarf strains" or "dwarf sports"; witness, for example, a "Cupid" Sweet Pea or "a dwarf *Antirrhinum*." In the Mignon Dahlias which are planted in Messrs. J. Cheal and Sons' beds at the White City, there is nothing of this uncanny appearance. They look just as natural as "fairy" Roses, and might be, like them, a distinct species. They are compact little plants, about eighteen inches high, and bear well-proportioned, single flowers. The following varieties appealed to us very much: *Pembroke*, a nice clear shade of lemon; *Agnes*, very bright crimson, tending to magenta, but quite a pleasing colour; *Niveus*, white; and *Lancer*, good bright scarlet. They would make most useful fillings for the front rows of herbaceous borders.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

An Appeal to Gardeners.—May I appeal to gardeners and amateurs who possess surplus plants of Kale, Savoys, Broccoli and the like not to waste them, but to assist in the good work undertaken by the residents of the Hampstead Garden Suburb? Feeling that there may be a scarcity of food in more crowded areas at a later date, the residents have set to work to dig the waste ground of the Suburb. They hope to have a considerable quantity of foodstuffs for distribution by these means. Parcels of plants will be made good use of, and will be gratefully acknowledged. They may be sent, carriage forward, to Mr. J. T. Marks, 18, Corringway, Garden Suburb, Hendon, N.W. I can confidently recommend this as a good cause.—CYRIL HARDING.

To Preserve Damsons or Pears for a Month to Six Weeks.—My great-grandmother's plan was to fill a large earthenware or stone jar with fruit, and after baking it in the oven, to seal the

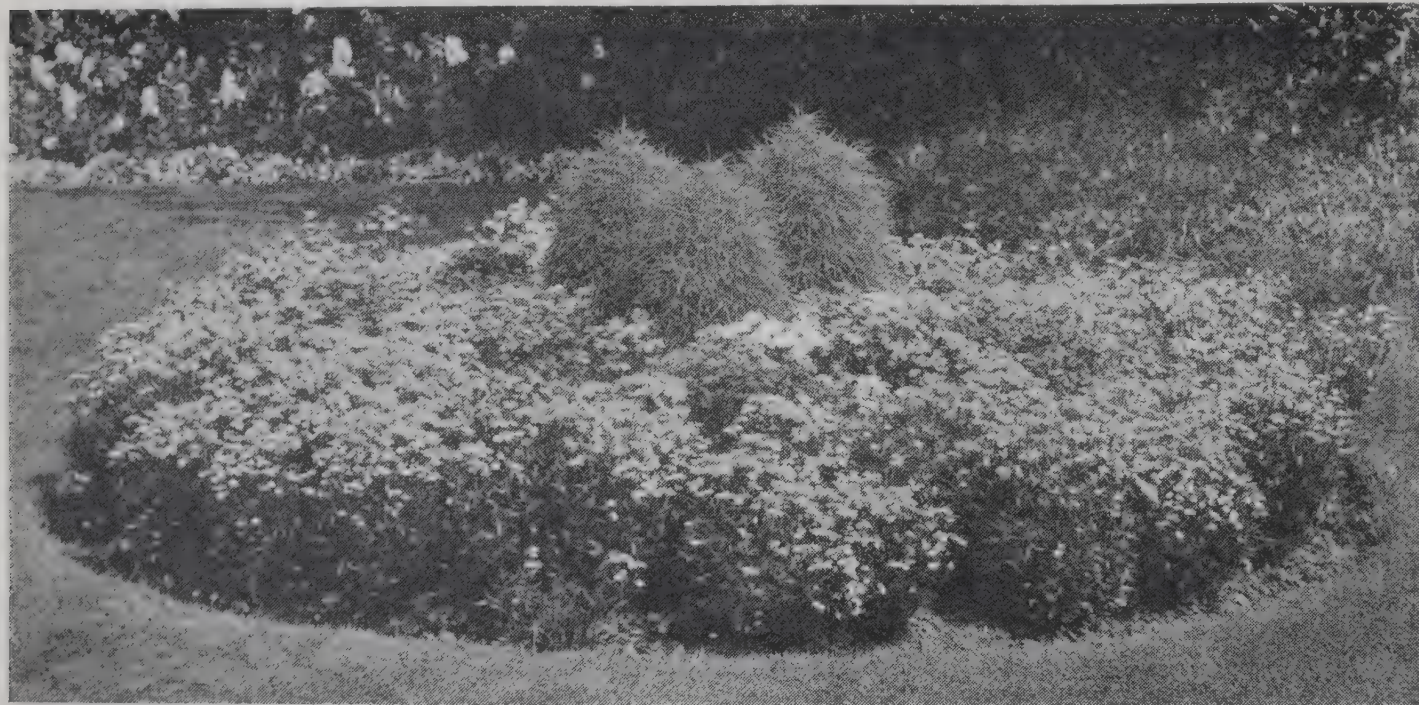
Maman Cochet, White Maman Cochet, Mrs. E. Mawley and Charles Lefebvre. (b) Defect of the kind mentioned is very seldom seen in Melanie Soupert, Leslie Holland, Edward Mawley, Dean Hole, British Queen, Molly S. Crawford and Maréchal Niel; (c) while a large number seem liable to produce a divided bloom at any time of the year. You will notice that in the second group (the more uniformly good blooms) there is a looseness of arrangement in the petals, and in the first group the petals are much more tightly folded. Is it due to changes in temperature? The cause must operate at an early stage. Can it be due to wind bruising or twisting the infant buds?—R. F. C., North Devon.

Coprosma baueriana variegata.—This greenhouse shrub is not met with to anything like the same extent that it once was. Very few, if any, subjects have the variegation more clearly defined than this, for which reason it forms a very pleasing feature in the greenhouse. It used to be largely employed for summer bedding, but is now not often seen. This Coprosma is not at all difficult to strike from cuttings of the young growing shoots if care is taken not to let them flag before they are

when in full growth, leaving unsightly blanks in the beds. The newer strains are a vast improvement upon the original. The growth is dwarf, compact and exceedingly floriferous, while the colours are very varied. The bed illustrated consisted of the Triumph strain, with a border of Blue Gem. The colours of the Triumph strain were very beautiful, and hardly any two plants were alike, yet all harmonised well. Blue Gem, seen from a little distance, looked wonderfully like very good Forget-me-nots. This bed was in my own garden, and I can safely say no bed of flowers ever gave me more satisfaction. The plants stood well in both dry and wet weather. Rain certainly spoiled the blooms for a time, but a few hours' sunshine brought out a fresh crop, and the effect was as good as ever. I do not think any other annual could give such a beautiful and lasting effect as do these new Nemesias, and those who have not yet given them a trial should make up their minds not to let another season pass without trying a bed of them. I may add that out of the large bed shown in the illustration I do not think one plant failed.—J. DUNCAN PEARSON, Lowdham, Notts.

Lewisia Howellii as a Moraine Plant.

—Having been much interested in your note in the issue of THE GARDEN for August 8, page 400, on *Lewisia Howellii*, I write to ask whether any of your correspondents can say if it is unusual for the above to flower twice during the summer? My plant, which was bought in March, 1913, did not flower that year. I covered it with glass to keep the crown dry, but admitted plenty of fresh air all round during the winter. The glass was removed early in April, and the flower-spikes began to push out immediately. There were thirteen of them on the one plant. They grew about a foot high before the buds unfolded, and each bore about forty flowers. The stems were somewhat recumbent, and formed a perfect crown of flowers. The flowers were very attractive to hive bees, and I was able to secure a good



NEMESIAS OF THE TRIUMPH STRAIN, EDGED WITH BLUE GEM, IN A MIDLAND GARDEN.

jar and bury it in a cool, shady place in the garden (about a foot below the surface of the soil) till it was required for use (after all the freshly gathered fruit was finished). The disadvantage of this method was that, when the jar was opened, it was necessary to use the fruit immediately, else it soon fermented. Bergamot Pears lend themselves well to this treatment, also Bullace Plums. One year, when there was a hard frost before Christmas, we could not dig up the jars, and after that experience we took to bottling our fruit in the way I have previously described.—ANNE AMATEUR.

Roses with Divided Blooms.—Autumn blooms of several varieties show a fair proportion of this defect. In my collection W. R. Smith is never free from it. How many blooms in exhibition stands of first merit show divided blooms towards the end of the day—even "silver medal" blooms in the autumn show! I cannot help thinking that there must be some definite cause, and that great credit will accrue to the discoverer of it. (a) In my small collection of 150 plants the following very seldom give a perfect bloom: W. R. Smith,

inserted into the pots of soil. If they flag, the action of rooting is greatly hindered.—H. P.

The Aster as a Hardy Annual.—The Aster disease has made sad havoc among Asters treated as half-hardy annuals. Those who have had recourse to sowing the seeds in a cold frame instead of in heat have found that the result has been a considerable abatement of the disease, proving that cool conditions suit the plant best. Having myself been a considerable sufferer from the disease this season, I was greatly pleased the other day to find in the gardens of Messrs. Todd and Co., Edinburgh, large breadths of Asters in the pink of health and without a blank. On enquiring about the method of cultivation, I was told that they were sown where I saw them. These gardens are situated at Stoneybank, Musselburgh, where the soil is rather light.—C. C.

The Newer Nemesias.—The original *Nemesia strumosa* Suttonii made some stir when first sent out, and certainly it gave us a novelty in half-hardy annuals; but there were two weak points about the plant. The growth was straggly, and plants had a very tiresome way of dying off

crop of seeds. As soon as the last seeds were ripe, the stems fell off and a new set of stems began to push out. These grew more rapidly than the first ones, and now (August 11) there are eight of them flowering at a height of 6 inches or 7 inches, each with about forty buds; hence the plant is now more like your illustration and others that I have seen, being so much dwarfer than during the first blooming. It is surely one of the very best rock plants ever introduced. I may say that I grow it in a moraine bed chiefly composed of whinstone grit.—H. M. BROWN, Duns, Berwickshire. [We forwarded this letter to Mr. R. Wallace, Kilnfield Gardens, Colchester, who replies: "Our own plant, which you illustrate in your issue for August 8, ripened a good crop of seed, but is behaving quite normally, not flowering twice. It is interesting to see that Mrs. Brown's plant has also been grown largely in chips. We have not protected ours in any way, but then we are doubtless much drier here, which would give us shorter flower-stems and also render winter conditions less unfavourable to the plant."—Ed.]

VERBASCUMS IN GARDEN AND WOODLAND.

SHOULD the rise, progress and development of hardy plant gardening during the past forty or fifty years ever come to be reviewed in detail, that of plant grouping now favoured, as opposed to the heterogeneous mixtures or spottiness of earlier times, would assuredly find prominent place. To-day we know something of the commanding presence of plant grouping in many directions, and while we cannot say that, as yet, it has reached its zenith, we have had a foretaste of it sufficiently good and assuring in its results to guarantee both continuance and extension in the same direction. Now that it has come—now that plant grouping is practised in woodland and shrubbery, by waterside and in rock garden—we wonder why its coming was so long delayed, seeing that Nature everywhere speaks of it in no uncertain way. It may be seen often enough in Willow-herb or Foxglove in woodland at home; in clouds of gold or purple, as Gorse or Heather garnish in their season common or moorland; or in greater array abroad, where Nature for countless years has mobilised flower beauty or tree life in never-ending battalions—things only for Nature herself, but whose replicas, in the veriest miniatures, it is true, are possible of reproduction in not a few parks or gardens to-day. In some directions more than the thin end of the wedge of this type of gardening has been inserted, and with such excellent results that there is a demand for more.

It is in this connection that attention is directed to some excellent groupings of Verbascums (Mulleins) at Clandon Park, where much good hardy plant gardening may be seen, now with Primulas, or anon with the brilliant Anchusa or Rose, and often enough with some of those finer examples of plant life, suited to woodland or like place, as the plants we have in mind. It needs but a glance at the illustrations accompanying this article to get an idea of the effect of free grouping generally; it may be with dozens or hundreds, according to individual needs or requirements. On this point little need be said; the illustrations speak for themselves. Matters of greater import to the gardener who as yet has not tried these plants are a due appreciation of their ultimate development and the means by which such development is attainable.

In the first place, it would be well to realise that while a few of the species are of perennial duration, all for the purpose we have in mind are best regarded as of biennial duration only; that is to say, the more imposing pictures of which these Mulleins are capable are forthcoming from plants whose rosettes of leaves have

reached their fullest development from the seedling stage without a check. To achieve this, seeds should be sown either in the late summer or early autumn months of the year in a cold frame, or during the early spring months in slight warmth. In each case the seedlings, as soon as they are large enough to handle, should be transplanted either into pots or boxes, and as early as possible got out into their permanent places in the garden. There are no difficulties attending their cultivation—this, indeed, is of the simplest nature—though their ready response to a generous treatment is perhaps insufficiently recognised. Not a few of the hardy plant specialists grow

yellow and bronze. More recently still—during the summer of the present year—an entirely new and welcome shade of rose colour—Warley Rose—has been certificated, the new-comer destined to raise these important, easily grown subjects to higher rank and greater beauty than ever before. Already there are purple, red, rose, white, yellow of varying shades and bronzy yellow, so that in the not distant future the gardener might reasonably expect to find others of more distinctive hue of which we can but dream to-day. Those in the accompanying illustrations are handsome yellow-flowered kinds. Others of importance are the yellow-flowered giants already named. To these may be added *V. Caledonia* and *V. Thapsiforme*, bronzy yellow; *V. wiedmannianum*, purplish; and *V. phœniceum*, which, while among the neatest and dwarfest, is one of the earliest to flower. In large degree the plants flower in June and July, some extending to August or even later.

E. H. JENKINS.



VERBASCUM CHAIXII, THE NETTLE-LEAVED MULLEIN, IN THE WOODLAND AT CLANDON PARK.

these plants freely in pots, and in this way they are available for planting out over a longer period. The giants of the race, all yellow-flowered, *V. olympicum*, *V. pannosum* and *V. vernale*, may be anything from 4 feet to 8 feet high, the measure of their stature being also the measure of the treatment, generous or otherwise, they had received from the start. Some, like the first two named, form spreading rosettes of leaves whitish or woolly quite near the soil, the rosettes in their fullest development reaching 2 feet or 3 feet across. For many years yellow was the predominant colour found in these plants, while of late a hybrid set has come into being, of which, I believe, *V. Caledonia* was among the first, and which combines

ing period having been prejudicial to first-rate results. We are, however, enabled to note the values of many of the new seedlings raised here. Perhaps the best of all the orange reds is *The King*, a glorious self-coloured variety of tall, robust growth, with splendid branching spikes and grand flowers. The blossoms, brilliant orange red in colour, open flat, and are beautifully placed upon the stems. The diameter of the blooms is 3 inches, and the petals are three-quarters of an inch across the narrow section. For massing, *The King* will prove a really grand plant, it being such a splendid, free grower and so many flowers open together.

The variety *Thor* is in the front rank of Montbretias, a really good acquisition to the ranks of

THE BEST MONTBRETIAS.

OF Montbretias with yellow and golden colourings there is no end. Quite a long list of standard varieties could be enumerated, but it is certain that in a short time many of these will be entirely superseded and lost to cultivation. However, the newest forms are of such superlative merit that one cannot regret the loss of the older varieties. One of the grandest of the new yellows is *Golden Ray*, a massive flower, unchallenged except by *Star of the East*, which at present ranks as the finest variety. The colour is a pure golden yellow, and the blossoms open flat, showing the beauty of the flower to the full. The stems are branching and the flowers are nicely spaced, and open well together. Growth is strong and free, and we look to *Golden Ray* becoming a very popular variety in the near future.

The present year has been none too favourable for Montbretias in the Eastern Counties, the dry weather experienced over the grow-

these charming flowers. It is sometimes known as the "Watsonia-flowered Montbretia," as its trumpet-shaped blossoms are carried upon erect spikes in the manner of *Watsonia Ardernei*. Thor reaches a height of 3 feet to 4 feet—the latter if the season is at all suitable—and its colouring, a brilliant fiery red, is very telling and attractive. It is an easy grower, and does not need staking, even if the plants are grown singly. The blossoms are freely produced, and a big grouping of this variety forms one of the most glowing features of the late summer garden. The variety is one of the many novelties raised here, and may be commended to those Montbretia lovers who want something better than Lord Nelson, Fire King, Lutetia and other brilliant-hued forms.

P. S. HAYWARD.

Clacton-on-Sea.

THE ORDERING OF BULBS.

D OUBTLESS not a few of our readers, in view of the present state of affairs, will be exercising their minds as to the ordering of bulbous plants for bedding, forcing and the usual requirements of garden and greenhouse, and mentally enquiring as to the possibilities of securing supplies. So much, indeed, might have been anticipated, and is, moreover, confirmed by enquiries which have reached us *à propos*. In view of this, and to allay any anxiety that might be felt by the thousands of our readers who delight in having garden or greenhouse gay during winter and spring, we have instituted enquiries in several directions, the results of which go to show that there is no immediate cause for anxiety. In certain instances, indeed—Daffodils and May-flowering and Darwin Tulips more particularly among bulbous plants of stately growth, consequent upon the ever-increasing area under cultivation of such things within the limits of the British Isles—there is little cause for anxiety, the stocks being large, in superb condition, and ripe for immediate distribution. Hence in these directions gardeners, among others, might well adopt the principle of "Business carried on as usual," and, by encouraging home industries, demonstrate their gardening zeal and patriotism in a single act. At such a time, too, it is well to remember the sources of our supplies of such things. Of the kinds above named, enormous quantities are cultivated in the Wisbech district of Cambridgeshire, while the districts around Bath, Nottingham, Kidderminster, the Thames Valley, portions of Surrey and Middlesex all cultivate these bulbous flowers on an extensive scale. Nor can we forget the part which Ireland plays, her contributions, indeed, going to swell the huge army of Tulips and Daffodils, together with many of the smaller bulbous-rooted subjects which find so much favour with the amateur in the decoration of the garden. In like manner, in the district first

named, certain bedding Crocuses, *Chionodoxas*, Anemones, Dog's-tooth Violets and others are both extensively and well cultivated, the latter invariably indicated, as in all things British, by solidity and firmness. In addition to the above, the Scilly Islands and Guernsey contribute huge quantities of bulbs, many hundreds of tons coming annually from these sources alone, and which include such delightful subjects as Freesias, *Ixias*, *Sparaxis* and others. France in her turn contributes largely of the popular Roman Hyacinth, so valuable for earliest forcing; also Polyanthus or Bunch-flowered Narcissi, Freesias, the lovely de Caen Anemones and others, some of the consignments of which are already to hand. Holland in her turn sends

example and precept and so far as circumstances permit, will they, one and all, endeavour to live up to the principle of "Business carried on as usual."

FLOWERING CANNAS.

WELL known as are the present-day race of flowering Cannas, I do not think that their merits for the decoration of the greenhouse are now appreciated to the extent they might be. We must go back to a little more than a quarter of a century for the beginning of this group of Cannas, the earlier examples of which created quite a *furor*. It was M. Crozy, then of Lyons and afterwards of Hyères, who developed the Canna as a flowering plant to an extent that was not before anticipated. As the raiser continued to put new varieties on the market year after year and others took the matter up, the list of varieties was soon a long one, and many gained recognition from the floral committee of the Royal Horticultural Society.

For the embellishment of the greenhouse they soon became popular, and to a certain extent they still remain so, although, as above noted, I do not think sufficient use is made of them. One reason of this is, I think, that the gross feeding nature of the Canna is apt to be overlooked, and those that flower well early in the season do not give us of their best later on for lack of some stimulant. I have seen plants established in 6-inch pots which were simply packed with roots. The plants gave one fine crop of blossom, after which they should have been shifted into larger pots or given frequent doses of liquid manure or some of the many stimulating plant foods now on the market. Under this treatment they will flower well on into the autumn.

Out of doors, too, the same liberal treatment is necessary, and in planting a bed, if the soil is at all dry, it is far better to fashion the bed saucer shape in order to allow water to be copiously applied. This frequent lack of nourishment in



VERBASCUM OLYMPICUM, ONE OF THE GIANTS OF THE RACE.

vast quantities of bedding and other Tulips, Hyacinths and Daffodils, to say nothing of the hosts of miscellaneous bulbous flowering subjects.

Some of the Dutch consignments are, we know, already to hand, and others are expected; though if there is a shortage at all, it might be expected from this source rather than from that of the others named, not from any lack of supplies, but from the sheer impossibility of handling the stocks at this critical juncture in Europe's history. In any case enough, we think, has been said to show that there are available at the moment very considerable supplies of bulbs of many classes calculated to make the garden beautiful, so that neither gardeners nor amateurs need stay their hand, but rather, let it be hoped, as British citizens, both by

the case of these gross-feeding Cannas may well be made a note of, as if plants that are suffering in this way are taken in hand now, a late summer or early autumn display may be ensured. We are frequently told that these Cannas may be safely wintered anywhere free from frost, underneath the greenhouse stage being often indicated as a suitable spot for them. This may be followed without question in the case of the more robust varieties, but the weaker kinds may deteriorate under such treatment. That particularly attractive section whose flowers are of some shade of yellow, dotted more or less with red, have weaker rhizomes than the others, and consequently are far more particular where they are stored during the winter.

H. P.

THE COBWEB HOUSE- LEEK.

THIS attractive Houseleek (*Sempervivum arachnoideum*), so brilliant in the summer with its glinting cobweb-like deposit stretching from leaf to leaf in a close silken veil, makes a pretty subject for some sun-baked crevice in full sun, either in the rock or wall garden. It is one of the comparatively few plants which will thrive in a position overhung by other rocks, thus protecting it from the major portion of the rainfall—provided the sunrays are not prevented thereby from falling upon it.

In time, the original plantation, maybe of a few rosettes only, develops into a curiously nummock-like form, the younger generation actually growing upon the decaying remnants of their predecessors, and eventually the whole forms a striking colony, as the illustration of a clump in my garden here at Woodford clearly indicates, while the beauty of the cushion is greatly enhanced when the mature rosettes rise for flower, gradually erecting themselves into a miniature lighthouse-like column, upon the top of which are borne the bright red star-like flowers, usually upon three to five branching sprays. Frequently, in the mountains, I have come upon portions of the rock face literally encrusted with vast numbers of these dainty Houseleeks, and there, in the torrid sunshine of the clear mountain atmosphere, the leaves of the rosettes were of a rich crimson colour, while the "web" was more brilliantly white than I have ever seen it in

this country. When we realise the fierce heat which beats down upon the plants in such a district, it is easy to understand the value of the web-like veil, which protects the infant leaves from the scorching that would otherwise be liable to occur.

In the garden the plants take kindly to almost any soil—gritty loam suiting them admirably—while if a piece of glass is placed above them from November to March, the "cobweb" appearance is retained, otherwise the excessive wet of our winters destroys it, though it reappears with returning spring. Propagation, as with nearly all the Houseleeks, is the simplest matter possible. It is merely necessary to take off some of the baby rosettes which form so freely and place them in a pot of gritty soil, using the parental ligature as an anchor, when new roots readily form from the juncture of this and the rosette itself, and the offset rapidly develops into a fresh colony.

R. A. MALBY

PRACTICAL NOTES ON VEGETABLES.

Cabbage.—The main batch of spring Cabbage should be planted without delay. If the plot on which the Onions grew is available, that affords a good site, as usually the preparation for the Onion crop is of a liberal character as regards deep digging and heavy manuring. The surface, too, will have been kept free from weeds. All that will be required for the Cabbage plants under such conditions is to draw drills with the corner of the hoe 15 inches apart for the dwarf-growing sorts like Ellam's, 18 inches for Flower of Spring, and 2 feet for the larger-growing Enfield Market. If the weather is dry at planting-time, well water the drill before planting and put in the plants with a trowel or hand fork, selecting the most sturdy plants. Plant somewhat thickly with a view to economy of space, as, when cutting

Cover this with a clean hay band and bank up the base of the plant with soil to ensure entire exclusion of light. As the plants progress, add more paper, hay and soil. Secure each plant with a stout stake to prevent it being rocked by wind, which would loosen the roots and check growth.

Celery.—Remove all side growths as they appear, restricting the energy of the plant to one stem. Continue to supply the roots required for exhibition, which are being blanched by the aid of brown paper, with copious supplies of liquid manure. By this method of blanching, the watering of the plants can go on right up to the time of using the Celery, if necessary. The main crop required for winter and spring, which is blanched by the usual soil earthing method, should be encouraged to grow rapidly by the aid of abundance of moisture at the roots, as when earthing up commences no more stimulative food can be given. From six to eight weeks are required for blanching successfully. Remove

all side growths from the base of the plants, and tie the leaves of each up straight and close together with a single piece of raffia to prevent the soil falling into the middle of the plant, which causes crooked growths. Before placing the soil about the plants, dust the surface with soot and lime, as a deterrent to slugs. Carefully chop the soil on each side of the trench and draw it carefully about the plants with the hands to a depth of 6 inches, more or less, as the length of stem denotes. The heart of the plant should not be covered. When the soil is placed firmly in position, cut the raffia from each plant to allow freedom of growth.

Runner Beans require constant attention to prolong their growth and

thus obtain a maximum crop. During dry weather give copious supplies of water to the roots; if liquid manure, all the better. Syringe the plants in the evening after a hot day. Keep the Beans constantly gathered, not allowing any to seed, as this checks the growth of future supplies.

Onions.—The bulk of the crop will be ready for lifting, which should be done carefully, remembering that bruised bulbs will not keep so long or as well as those taken up carefully. The large exhibition bulbs which have rooted deeply should be taken up with a fork, allowing the roots to die away gradually. Spread them out on a dry border until they ripen off thoroughly, turning them over daily. Should wet weather prevail, place them under cover. The ordinarily grown, outdoor-sown Onions will also be ready for harvesting. They should be treated in a similar manner, turning over the bulbs frequently.

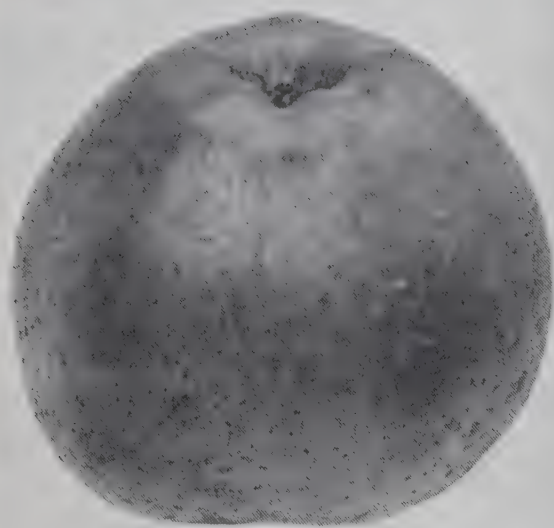
Mushrooms.—Now is a good time to make a start with winter culture in sheds, cellars, or a



A COLONY OF THE COBWEB HOUSELEEK (*SEMPERVIVUM ARACHNOIDEUM*).

commences early in spring, if every other plant is removed, those remaining will have ample room to develop. If the Onion bed is not available, any open piece of ground will suffice, provided it is deeply dug and well manured, according to the crop previously grown there, whether of an exhausting nature or not. When planting is completed, cover the surface for 3 inches around every plant with finely sifted coal ashes, as a preventive measure against slugs, which are partial to the succulent Cabbage plants.

Cardoons.—Encourage all possible growth by well soaking the soil with liquid manure weekly. Preparation should be made to blanch the stems, which requires a period of eight to ten weeks. The aim should be to ensure clean stems free from attacks by slugs. Nothing is better than brown paper and clean hay bands. The leaves should be tied together at the top; then take a piece of stiff paper 6 inches wide and, for convenience, about a yard long, and wind it securely round the stem



DESSERT APPLE KING HARRY.

properly constructed house with a northern aspect. Collect horse-manure with a quantity of short straw and place it in a heap, 2 feet or 3 feet thick, in an open, airy shed, where it can be kept dry and the rank steam can escape. Turn it over every day for the first ten days; that which is in the middle one day should be placed on the outside the next. At the end of ten days the heat will decline, when less frequent turnings will be required, say, about every third day. When the heat is declining, the bed should be made up on the floor of the house or shed. Two feet deep and 3 feet or 4 feet wide, as circumstances permit in the shed, will make a good bed. Tread and ram the manure down as firmly as possible. The heat in the manure will again increase when put solidly together. A test thermometer should be employed in the bed, and as the temperature declines to 75°, spawning should take place. What is known as Milltrack spawn should be used, breaking up the cakes into pieces about the size of a hen's egg. Insert the pieces 3 inches deep and 9 inches apart evenly over the bed, fill in the holes with manure, and make all firm on the surface. In a week's time the bed should be covered with fresh loam, free from stones, 2 inches thick, beating it down firmly with the back of a spade. Cover the bed with hay or stable litter to prevent the escape of moisture from the soil.

Parsley.—Sow seed in a frame to keep up the winter supply. Thin the plants to avoid overcrowding, and remove the lights when the plants are established and growing freely, to be returned as the winter approaches. Plants in the open should have any decaying leaves removed and the soil frequently stirred to encourage rapid growth. For security of crop during the winter and in a locality not favourable to this plant in the open, a batch of plants should be lifted from the open and placed in a cold frame on a warm south border, where they can be protected during severe frost. Another batch should be lifted from the open and stored in soil at the foot of a south wall, protecting the plants during severe weather by boards or litter.

Spinach for winter and spring use should be growing freely. If the plants are too thick, remove the weak ones to encourage robust growth and avoid decay of the inner leaves. Keep the soil well stirred between the rows, and give an occasional dusting with soot over the leaves to clear the plants of slugs and accelerate growth.

Swanmore.

E. MOLYNEUX.

STORING THE APPLE CROP.

AT the present time the conservation of our fruit supply is of first importance. A large amount of fruit is annually wasted owing to improper storage, and frequently from improper gathering, and this point will deserve our first consideration. The whole secret of keeping fruit is summed up in the word "finish." The maximum of sun and air must be given to each specimen, and the tree must not be allowed to have more fruits than it can mature. Any overladen tree would be much better thinned even now, and the thinnings could be cooked, rather than allow a larger crop of immature fruit. Of the early kinds now coming in, it is most important to gather them before they show signs of ripeness. They will all slowly mature in a cool room. The result of later gathering will be that they are all ripe at the same time. Great assistance to the proper ripening of the fruit would be given by removing at once all side shoots which shade the fruit, and even the leaves which cover the fruit could be removed with moderation without injury, as the fruit-buds for next season are now forming. Watering with weak liquid manure for the later sorts is of the greatest assistance. It need hardly be emphasised that the greatest care in gathering the fruits and carrying them to the store must be exercised. For the later varieties, which mature about Christmas and onwards, it is vitally important that they be left on the tree as long as possible. Any fruit gathered too early will shrivel and lack quality.

A Suitable Store.—The three essentials for storing are an even temperature, a certain moisture, and darkness. These conditions are generally to be found in a cellar, and in most houses this is the most suitable place. It must not be thought, however, that without such accommodation fruit-storing is impossible. An outside shed with thick walls, or an attic which could be darkened, will keep fruit for a considerable time. The custom of keeping fruit on straw is not to be recommended, as in time the flavour is absorbed by the fruit. There is nothing better than placing fruit upon plain wooden shelves, providing they have not been newly made. The cooking varieties could be laid in heaps, and if they are late kinds they will not suffer in any way. Those who have no accommodation such as above mentioned may successfully keep the fruit in small boxes, which could be stored in any room. The boxes should be lined with moderately thick paper, the fruits laid in rows with a sheet of paper in between them. These could then be piled in any room which is not hot, and will keep some considerable time. A further method which will preserve Apples far beyond their usual season is to wrap each fruit in paper, place it in a box, and cover each layer with clean silver sand. By this means fruits of Cox's Orange Pippin may be kept quite successfully up till April, and will retain much of their flavour and crisp texture.

Varieties to Store.—The varieties for storing must be mid and late season sorts; none of our earlier Apples such as are at present on the market are of any use at all for storing. In a cool room they may be kept for a week or two, but to buy these fruits for winter use would be a great mistake. The first Apple which will be found in quantity on the market will be King of the Pippins. The fruits,

if treated as advised, can be kept till Christmas. Other sorts which are likely to be available in quantity are Ribston Pippin, Cox's Orange, Allington Pippin, Blenheim Orange and Fearn's Pippin; and of the cooking sorts, Bramley's Seedling, Golden Noble, Lord Derby, Warner's King, Bismarck, Lane's Prince Albert and Newton Wonder. Also, in the case of cooking sorts, none of the early varieties now on the market are of the slightest use for long keeping; and it may be given as a general rule that only such Apples which are marked in nurserymen's catalogues as from October and November should be used for this purpose.

Should it so happen that the autumn is not warm and sunny, the latest fruits of all may be improved by placing them in a warm room about a week before they are to be used; but given a sunny August and September, there seems every prospect that Apples will be especially well matured, and should the present low prices for fruit continue, it will be an excellent opportunity for householders to lay in a good store of the most valuable of hardy fruits.

Maidstone.

E. A. BUNYARD.

TWO USEFUL APPLES.

STIRLING CASTLE AND KING HARRY.

THESE two varieties are both early and useful. Stirling Castle is the better known, both as a market fruit and for use in private gardens. It is a certain and heavy cropper; indeed, its fertility is so remarkable that the trees are often borne down with the weight of fruit, and for this reason it is not a variety suitable as an orchard standard. As a bush or pyramid, however, it is one of the best cooking varieties in cultivation. By reason of its heavy cropping propensities it pays for severe thinning. The fruits, which are handsome and of good size, but not highly coloured, are in season from September till November. The flesh is snowy white, sub-acid in flavour, and crystalline.

King Harry is a little-known dessert variety. The fruits are of medium size, lemon yellow in colour, of crisp texture, and fine flavour. The skin is rough, rather thickly covered with russet dots. It is in season in September and October, and makes a capital pyramid tree. Very few nurserymen seem to list this variety, although it is included in Messrs. J. Veitch and Sons' catalogue of fruit trees. It is an excellent variety, and only needs to be grown to be appreciated.



COOKING APPLE STIRLING CASTLE.

THE WISLEY TRIALS.

Melons, New and Old.—From time to time trials of fruit, vegetables and flowers are held in the Royal Horticultural Society's gardens at Wisley. Foremost among the trials this year are those for Melons, French Beans and Pentstemons, the results of which have just been issued. To only three varieties of Melons have the society's first-class certificate been awarded, viz., Hero of Lockinge, Sutton's Scarlet and Frogmore Scarlet, the first two being shown by Messrs. Sutton and Sons, Reading, and the latter by Mr. Dawkins, who has recently started in business for himself at Chelsea. It will at once be noticed that these three varieties are by no means new. Hero of Lockinge, for instance, has been known for years, and we believe it to have been raised about half a century ago. It is interesting to note that an old variety still holds its own with those of recent introduction. The Melon trial was quite a representative one, and varieties, both new and old, were sent from nurserymen in all parts of the British Isles. The varieties, as in all cases in the Wisley trials, were grown under numbers, the names of the varieties and of the exhibitors being kept secret until after the judging had been completed. The Melon trial reflects the highest credit upon the cultural skill that has been given. The plants looked the picture of health, the crop was excellent, and no one could have wished for a better house of Melons. Awards of merit were granted to the following varieties: Emerald Gem and Perfection, from Messrs. Sutton and Sons; Eminence, from both Messrs. Sutton and Sons and Mr. Dawkins; Mymms Hero, sent by Mr. Hazelton; Windsor Castle, from Messrs. Barr and Sons; and Duchess of York, sent by Messrs. Dickson, Brown and Tait. Messrs. Carter and Co. were highly commended for their Amberwood Beauty and Barnet Hill Favourite, a similar award being voted to Mr. P. Davies for Sentinel and to Messrs. Robert Veitch and Sons for King George.

Awards to French Beans.—On the same occasions (July 30 and August 10) a sub-committee appointed by the fruit and vegetable committee examined the trials of French Beans at Wisley, when first-class certificates were awarded to the following varieties: Canadian Wonder (Improved), from Messrs. Barr and Sons; Canadian Wonder (Selected), from Messrs. Sutton and Sons; Early Forty-fold, sent by Messrs. Watkins and Simpson; and Perpetual, from Messrs. Carter and Co. In addition, the following awards of merit were made to Sunrise and Magpie, from Messrs. Carter and Co.; Eldorado, and Evergreen, from Messrs. Hurst and Sons, the last-named variety also being sent by Messrs. Sutton and Sons and the former by Mr. F. Simpson; and Excelsior, from Messrs. Barr and Sons. The varieties Dwarf Prolific and Masterpiece were both highly commended as pot Beans.

Trial of Pentstemons.—A sub-committee appointed by the floral committee visited Wisley on July 31, when the following somewhat lengthy list of awards of merit were recommended for Pentstemons: Lady Sybil, Gay Garland, Aldenham Pride, Persimmon, Admiral Togo, Sportsman, Fair to See, Mrs. A. C. Sweet and Virgil, all sent by Messrs. Cutbush; Rosamund, from the Lapworth Nursery Company; James Douglas, Jane Dieulafoy and Phryne, from Messrs. Barr and Sons; Mrs. Fred Fulford, from Messrs. Thompson; Margarite Baden, sent by M. Pfitzer; Crimson Gem, from Mr. E. Beckett; Alex. Wood

and President Carnot, both from Messrs. Dobbie and Co.; and Southgate Gem, sent by Messrs. Barr and Sons, Mr. W. Simpson and Messrs. Dobbie and Co.

GLADIOLI AT THE WHITE CITY.

MESSRS. KELWAY AND SON of Langport staged a magnificent collection of Gladioli at the White City on August 11. It was originally intended to display them at the Royal Horticultural Society's Hall in Vincent Square, but owing to that building being taken over for sleeping quarters for soldiers, the flowers had to seek a new resting-place. There was an immense number of varieties of the large-flowering types that are the firm's specialities, and almost all of them were of recent introduction; several were unnamed and waiting for an increase in the stock before being sent out. One was a

Measure is a most lovely yellow, the high-water mark of the firm's efforts in this direction. I remember seeing it at Shrewsbury two or three years ago and being very much "taken up" with it. I still am. There is more than a suspicion of buff in its shade. The individual flowers are large and round. One of the most pleasing of all the reds was Prince Henry of York. It is a true vermilion, not so large as many of its neighbours, but perhaps none the worse for that, as it looked as if it would stand rough weather. The attendant said it was very popular for harvest festivals. Among the others, I noted especially Vanessa, a large and handsome pink; John Churchill Craigie, an effective scarlet with pale yellow centre; Lord Alverstone, a curious mixture of scarlet and magenta, three petals being of one colour and three of the other; Masterpiece, cherry red; Nemesis, a pretty pale pink; and Kenneth Kelway, a smoky purple.

One left the exhibition feeling sorry more flower-lovers would not see it, for those in authority



A VIEW OF THE MELON TRIAL AT WISLEY, IN WHICH OLD VARIETIES COMPARED FAVOURABLY WITH NEW.

particularly striking shade of cherry crimson with bluish-looking markings or blotches on the lower petals. I believe it is to make its *début* next year as the Rev. J. Jacob. There were several beautiful whites; one, perfectly pure, called The Queen, has not yet been distributed. The individual blooms are quite round and without any markings. If I remember Europa correctly, I should say that this is a much better "thing," although it has never helped to swell a mania. Few people probably are aware of the exciting times of the Gladiolus in Holland during the last two years (1911 to 1913). Five bulbs of Meteor (now called Scarlet Emperor) changed hands for £100—£20 a bulb! I have not seen it, but it is described as a brilliant dark scarlet, extra large and beautiful. This was not among Messrs. Kelway's exhibits, but Panama, another famous mania variety, was. I liked it, but there were plenty of pale pinks as good—Lady Scott for one. This is of recent date, and a good example of this popular shade. The colour is heightened by effective little crimson blotches. Golden

told me how seriously the Declaration of War had crippled the attendance. There is behind every dark cloud a silver lining, and I prophesy that when that time comes, one of the flowers that will shine in our gardens with increasing brilliancy will be the Gladiolus.

JOSEPH JACOB.

HELENIUM PUMILUM MAGNIFICUM.

ONCE again are the golden flowers of *Helenium pumilum magnificum* attesting the value of this plant as a border flower, the shapely blooms being both pleasing in form and in colour. It is now an old plant, though many of us still remember its introduction and the pleasure with which we saw it for the first time. It is a capital plant, reaching from about two feet to three and a-half feet in height, according to the soil and the amount of moisture. In some catalogues it is said to attain a stature of 4 feet, but it rarely does this, and is more frequently about three feet. It is easily increased by division, spring being the best time for this.

S. ARNOTT

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Melon Plants in Frames require careful attention with regard to watering and ventilating to ensure a satisfactory finish. Very little atmospheric moisture will be necessary, but at the same time the plants must not be allowed to suffer from want of water at the roots. When this becomes necessary, it should be applied early in the day, and not within 6 inches of the stems. Keep lateral growths thinned sufficiently to permit light to reach the bed, and raise the fruits on small pots in order to expose them to the sun. Ventilate the frame early in the day when the weather is favourable, shutting it up early in the afternoon in order to make the most of sun-heat.

Cucumber Plants for Winter Supplies.—These should now be making good progress, and will require judicious stopping and tying in order to build up sturdy plants which will be capable of producing a continuous supply of Cucumbers through the winter. Top-dress the bed as often as young roots show through the soil, as this is the best means of keeping the roots healthy and constantly in search of food. Avoid over-cropping by the removal of all fruits beyond what is necessary for the requirements of the place.

Plants Under Glass.

Chrysanthemums.—The buds on all large-flowering varieties should be secured as soon as possible, nothing being left on the plants beyond what can be grown into large, well-finished blooms by November. A moderate amount of feeding will be necessary, but avoid giving stimulants to excess.

Mignonette.—Plants which are intended for spring flowering should be thinned to three or four in a 5-inch pot. Supports may then be placed in position, and the young plants secured with pieces of fine matting to keep them in an upright position. Remove the lights during dry weather, and syringe the plants to promote clean, stocky growth. A light sprinkling of soot may be applied with advantage during mild, damp weather.

The Flower Garden.

Border Carnations.—These may be planted out as soon as the layers are sufficiently rooted, and, to ensure the best results, the border should be trenched and a quantity of new soil mixed with it. Decayed horse-manure may be used to enrich the soil if necessary. Before planting, it may be necessary to tread the border, but only if the soil is dry enough to crumble under the foot. Allow 15 inches between the plants each way, and make the soil firm about the roots.

Tulips.—The bulbs of late-flowering Tulips should be planted as soon as they can be obtained, for, although it is not usual to plant bedding varieties before October or November, Darwin and Cottage varieties will give better results if planted a month before that time. As these will be required for cutting, the border should be thoroughly prepared at once, so that well-developed flowers may be the result. The following are good varieties for this purpose: Clara Butt, Caledonia, Duchess of Westminster, Glare of the Garden, Inglescombe Yellow, Mr. Farncombe Sanders and Orange King.

Lilium tigrinum splendens Fortunei.—This is the finest of the Tiger Lilies, and, where an autumn display is desired, will be found a most satisfactory variety. The plants grow to a height of 5 feet in good, rich soil, but in poor ground they do equally as well, although seldom over 3 feet. Some of the established plants are in flower now, but I have seen many beautiful spikes here in November from spring-planted bulbs.

Shrubberies.—Give careful attention to the thinning and regulating of plants which are likely to become overgrown, and keep the ground quite free from weeds. Plants which were shifted during the spring should receive liberal supplies of water at the roots, and in exposed positions a mulching of some kind ought to be provided.

The Rock Garden.—*Erinus alpinus*, a pretty little plant with violet-coloured flowers, abundantly

produced, succeeds well in the rock garden or on old walls. It is easily grown from seeds, which may be sown in mossy chinks or crevices in which a little soil has been placed. *Fuchsia procumbens*, *F. pumila* and *F. Caledonia* may all be propagated by cuttings now, and are valuable for planting on the rockwork during the spring, where with ordinary care they will bloom freely throughout the summer.

The Hardy Fruit Garden.

Peaches.—These should be carefully examined twice daily and the fruits gathered before they become too ripe. If hot weather continues, some part of the shoots may be allowed to remain unnailed as a slight protection from strong sun. The trees must not be allowed to become too dry at the roots while the fruits are swelling, but should be freely watered. When the crop has been gathered, many of the old shoots should be removed to make room for young growths, and the foliage may be freely syringed early in the afternoon to keep red spider in check.

Apricots.—Trees on well-drained borders should be freely watered as soon as the crop has been removed. Avoid the use of manure-water, as this may cause them to produce gross wood, which is almost certain to be followed by canker. Let the branches be thinned sufficiently to admit the sun to all parts of the trees, and pinch young growths in order to produce fruiting spurs.

The Kitchen Garden.

Lettuce.—Continue to plant out Lettuce, both Cos and Cabbage varieties, in some sheltered part of the garden, and make another sowing of hardy kinds for winter. Maximum, All the Year Round, Hammersmith Cabbage, Brown Cos and Hardy White Cos are all good for this sowing.

Batavian Endive should also be planted now for use during the winter.

Winter Greens.—All vacant ground should be filled with some green crop for use during the winter and spring. Coleworts and other Cabbage may be planted at half the usual distance apart, as time will not permit them to grow to the usual size.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Celeriac.—The Turnip-rooted Celery should now have all suckers removed from the stem. Should there be a continual spell of dry weather, it will be necessary to give the plants a good soaking, as this crop must on no account suffer from lack of moisture at the roots.

Cauliflower.—If not already done, a sowing should be made to stand the winter. It will be as well to sow in the open border, as the seedlings will be less likely to become drawn there than if sown in boxes. When the young plants are a reasonable size, they should be pricked out into cold frames, and on no account place the lights over them unless in severe weather.

Corn Salad.—The cultivation of this Lettuce is on the increase, and as the great cry is for variety, this makes a good substitute for Spinach. Sow now in drills about nine inches apart, and when large enough thin out to 6 inches.

Globe Artichokes.—As the season is now advancing when growth is not so fast, it will be advisable to go over the crop and remove all the small lateral heads. This will enable the larger ones to swell more rapidly, and on no account allow any of the heads to flower.

Onions.—Seed may now be sown. In preparing the seed-bed it will not be advisable to make the surface too fine, as it would become hard after autumn rains. Sow thinly in drills, and, as soon as the young plants can be seen, run the Dutch hoe between the rows. An occasional dusting of soot will also be very beneficial. As to varieties for this sowing, the following are very suitable: White Emperor, White Tripoli and Blood Rocca.

The Flower Garden.

Agapanthus umbellatus.—Where this handsome plant is used as specimens in the flower

garden, it should be remembered that it is a gross feeder and requires abundance of moisture at the roots. As the plants are now throwing up their flower-spikes, an occasional watering with liquid manure will be of assistance. This plant is much hardier than is generally supposed, and I have seen it survive outside during severe winters. At any rate, there need be no fear of having it planted out permanently in favoured districts.

Bedding Geraniums.—The main batch of cuttings should be secured at once, as after this date early frosts are often experienced, particularly in the colder districts. Put the cuttings into boxes and stand them outside for a time; but should the weather be wet, they had better be put in cold frames.

Propagating Cuttings.—The work of securing cuttings of the various bedding plants should be commenced at once. In the case of the less hardy, soft-wooded plants, such as *Heliotrope*, *Ageratum*, *Mesembryanthemum* and *Iresine*, they had better be rooted in a warm pit. Sometimes great difficulty is experienced in rooting a sufficient stock of *Heliotrope*, owing to the growths being so soft. To avoid disappointment it will be as well to lift some of the old plants and have them potted. They can be wintered in a cool house and introduced into heat in the spring to produce cuttings.

Plants Under Glass.

Coleus.—A batch of cuttings of this decorative plant should now be secured for the double purpose of supplying small plants for autumn decoration and providing stock for another year. Care should be exercised to see that the cuttings are not taken from plants infested with mealy bug, which would be a source of trouble later on.

Violets in Frames.—As the frames will in any case be unoccupied, it will be as well to make them up to receive the plants next month. In doing so place some ordinary Pea stakes in the bottom, over which put a covering of rough leaves. This is especially recommended in damp situations. Fork in some good loam with a little leaf-mould, and, when finished, the soil should be made up so that the plants will be quite close to the glass. Continue to remove the runners and keep the plants well supplied with water.

The Hardy Fruit Garden.

Autumn-Fruiting Raspberries.—The bushes will now require protection from birds, and to hasten the swelling of the fruits they should have a good soaking of liquid manure. It will also materially assist them if the young growths are thinned out considerably.

Strawberries.—Layers that were secured last month will now be well rooted, and should be planted in the permanent quarters as soon as possible to give the plants time in which to develop the crowns before the close of the growing season. Should this planting be intended to fruit more than two years, ample space must be allowed between the rows and also between the plants.

Black Currants.—The crop generally has been better than for some years past. The bushes will be benefited by thinning out the old fruiting branches now instead of waiting till the winter. The young growths will be better ripened if exposed to the autumn sun.

Fruit Under Glass.

Peaches.—As the trees have been cleared of the fruits, the house should be opened and the border given a good watering. If any of the trees have not been at all satisfactory, the present is the time to see what is the matter. Should young trees have grown over-luxuriantly, they will require root-pruning. In doing so open a trench about five feet from the stem and fork away the soil until the vigorous roots have been located. Cut these off with a sharp knife, and in filling up the trench introduce some good loam and mortar rubble to encourage the development of fibrous roots. This work had better be done on a cloudy day, and if the trees show signs of flagging, an ordinary garden mat may be hung up in front of them during the hottest part of the day.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE GARDEN.

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SEPTEMBER 5, 1914.

NOTES OF THE WEEK.

Abandonment of the Autumn Rose Show.—We regret to learn that the Council of the National Rose Society has decided to abandon the autumn show, fixed for September 24, owing to the present crisis.

Our Bulb Number.—A few weeks ago it was feared that there would be a shortage of imported bulbs from Holland. We now know that many shiploads of bulbs have been safely landed in this country, and we propose to devote our next issue mainly to articles on the planting of bulbs. The issue will be profusely illustrated, and, in addition, will contain a coloured plate of new Daffodils.

Do Not Neglect the Garden.—The following is an extract from a circular-letter issued by the Council of the Royal Horticultural Society:

"While rightly denying one's self all unnecessary luxuries, it is, in our opinion, an act of the highest patriotism to live our normal lives as far as possible, cultivating the same area of land, employing the same staff, transacting, in fact, all our usual business and household arrangements. To act otherwise will of necessity throw numbers of men and women out of useful and remunerative work, who, having speedily exhausted their own very slender resources, must eventually become dependent upon the Poor Rate or on the almost equally undesirable provision of indiscriminate alms-giving."

Dahlia Show at the Crystal Palace.—We are asked to announce that the National Dahlia Society's exhibition will be held as usual at the Crystal Palace on September 16 and 17, and a conference will be held in the afternoon of the 16th inst. in connection with the same, particulars of which will be issued shortly. Schedules and all information will be sent on application to the hon. secretary, Mr. J. B. Riding, Forest Side, Chingford.

Pelargonium Mme. Crousse.—This beautiful variety, with its large trusses of semi-double, rose pink flowers, still maintains its position as one of the best Ivy-leaved Pelargoniums in cultivation. It is well adapted for furnishing large vases, either in beds or on terraces, and our illustration depicts well-filled vases of this variety as they now appear near the water-side in front of the Palm House at Kew. Like all other Pelargoniums, it is readily raised from cuttings taken either now or in the spring.

Fruit-Drying in Brick Ovens.—The Care of Food Committee, Vincent Square, Westminster, S.W., issue the following advice on fruit-drying in brick ovens: Though a somewhat tedious process, drying of Apples, Pears and Plums is well worth doing by those who have brick ovens. To dry the fruit (1) Apples and Pears should be quartered. (2) Plums left whole. A layer of fruit should be placed on the lid of a wicker basket, which should be put in an oven when the fire is low at bedtime and the door left open. Take out in the morning and keep dry. Repeat nightly for a fortnight. Store the fruit in earthenware jars with closed mouths.

The Chinese Sophora Tree.—Flowering towards the end of August and during the first

hardy rock plants, and even Wallflowers and Iceland Poppies, here and there over the surface. In planting (which, by the way, is best done in the autumn) it will be necessary to introduce some soil into the crevices, and if the plants are put in while quite small, they will be thoroughly established before the spring. Where seed is sown, it should first be mixed with soil, and be so placed that it will not be washed out by autumn rains. A few plants of *Erinus alpinus* put in near the top of the wall will in the course of a year or so become established all over by seeding.

Trials of May-Flowering Tulips.—As at present advised, the President and Council of the Royal Horticultural Society have decided that the trials of May-flowering Tulips, 1915, at Wisley and of cut blooms in the Royal Horticultural Society's Hall will be carried out as arranged. Growers should send five bulbs of each variety (named) not later than November 1, accompanied by a statement as to their colour and the class to which they belong. If sent by post, address The Director, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey; if sent by rail, The Director, Royal Horticultural Society's Gardens, Wisley, Horsley Station, L.S.W.R., with advice by post to the Director.

The Cultivation of Allotments.—In the hope that the example will be widely followed, we draw attention to a movement initiated in Cumberland and Westmorland for assisting workers to add to



WELL-FILLED VASES OF PELARGONIUM MME. CROUSSE.

half of September, *Sophora japonica* is a distinctly valuable and attractive tree. First introduced from China in 1753, mature trees attain a height of 50 feet to 80 feet. As lawn specimens they form round-headed trees, usually with branches near to the ground. The leaves, which are dark green and pinnate, give the tree a distinct character. Another feature of the *Sophora* is that the foliage remains on the trees in good condition till most of the deciduous trees and shrubs are quite bare. The small, Pea-like flowers are very freely borne in terminal panicles. They are creamy white in colour, with a tinge of pink in the keel.

Planting on Old Walls.—There are many unsightly old walls about gardens that could be made attractive by planting some of the more

their food supplies by cultivating allotments. In this case members of local authorities, landowners, manufacturers, agriculturists and horticulturists have formed a committee for the purpose. Teachers of agriculture and horticulture residing in the counties, and a county land agent, have been appointed technical advisers. The County Instructor in Horticulture is secretary. Landowners are asked to provide land free of rent, rates and taxes for a year. The committee supply technical advice, organise a supply of seedling plants, provide a form of agreement, and generally take steps to ensure that any able-bodied and willing worker who has spare time on his hands may utilise it under skilled guidance in providing an additional food supply for home use.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Effective Flower-Beds.—A bed of tall standard weeping Roses of Leontine Gervaise, dotted with Rose Enchantress and carpeted with Viola cornuta, has been very pretty and the combination very effective all through the season. The Violas were planted out the first week in May, and have made a fine show from about a fortnight afterwards, and the Roses are still blooming very freely. One or two dressings of Clay's Fertilizer have been all the stimulant they have received. Anyone who has not tried this combination will be very pleased with the result. Another bed of Rose Mme. Ravary (which does well here), carpeted with Viola Maggie Mott, is very effective. The Viola, I find, helps to shade the roots of the Roses, which is beneficial.—W. A. COOK, Godalming.

Rose Hon. Ina Bingham.—Those who only appreciate perfectly double Roses or Roses in the bud stage as we are accustomed to see them at shows will not agree with me when I say that this particular variety, the Hon. Ina Bingham, when seen in its fresh, fully opened state, as I look upon it now, is one of the most beautiful of all Roses. My specimen has three perfectly formed rows of petals (deep rose in the centres and pale rose at the edges) and a glorious middle of golden yellow stamens. It reminds me not a little of the beautiful Rose Celeste, and if anything can be an improvement on that old-fashioned beauty, this is. I allow it has not the same exquisite fragrance, but it is decidedly sweet-scented. Those who like single and semi-double forms may be glad to know of this variety. In Ridgway's American Colour Chart it is rose pink and deep rose pink on Plate XII., column 71.

Blue Shirley Poppies.—Thanks to the generosity of Messrs. James Carter and Co., I have grown this summer a strain of American-raised Poppies bearing the title "Shirley Poppy—Blue Shades." It was very far from being true to name, for many white and red shades appeared. In one particular patch I pulled all these out as soon as they showed colour, with the result that I have a residue of sober, quaintly coloured blooms. They all seem to be different shades of what my American colour book calls (Plate 50, column 69) vinaceous-grays. A very appropriate name for the race would be the "Quaker strain." They are to their more brightly coloured brethren of the Poppy race what the old-fashioned Quaker ladies of a century back were to their more showily dressed sisters. A few vases with suitable green foliage in a white drawing-room would be most effective and uncommon. Iris susiana has, of course, a similar sort of colouring.—JOSEPH JACOB.

Parsley Failing.—It is a well-known fact that in many gardens there is considerable difficulty in securing a good crop of Parsley, the crop often dying off *en masse* in a few days. Various antidotes have been recommended, such as mulch-

ing the crop, applying soot-water, nitrate of soda, or dressing the ground with soil fumigants. I have tried most of the foregoing, but to very little purpose. I was told by a neighbouring gardener that he, too, had had much trouble in raising a good crop of Parsley till he planted a row of young seedlings close to the front wall of a range of glass, where I saw it thriving luxuriantly. Last spring I followed my neighbour's example, with the result that we have a better supply of Parsley this season than we have had for several years. I have frequently noticed that a stray seedling among other dwarf plants, close to the Boxwood or near a hedge or wall, thrive well when the crop in the open succumbed.—CHARLES COMFORT.

Lantana salviaefolia.—Under the name of Lantana delicatissima this is a familiar object in many parks and gardens, where it is extensively



ROSA MOSCHATA ALBA BY OPENING IN THE LARGE YEWE HEDGE IN THE SPEAKER'S GARDEN AT CAMPSEA ASHE.

used for bedding purposes. Its merits, however, as a climbing plant for the greenhouse are not generally recognised. Planted out in a prepared greenhouse border, it will grow rapidly, and soon furnish a considerable space of roof or rafter. The long, slender shoots hang down for a considerable distance, and the round clusters of flowers are produced therefrom during the whole of the summer and autumn. Under glass the flowers are a good deal paler in tint than when fully exposed to the summer sun.—H. P.

The Blue Passion Flower.—It would be interesting to have comparative experience of the hardiness or otherwise of Passiflora cærulea, the blue Passion Flower, from various parts of the United Kingdom. So far as I can learn, it has not been extensively attempted in Scotland, but I have seen plants doing well for several

years in mild parts of the South-West of Scotland. I knew a plant which grew in a Dumfries nursery for a number of years, and which flowered freely enough on the front of a wooden building used as an office. This plant was killed by the unusually severe winter of 1884-85, which was fatal to many things considered hardier than Passiflora cærulea. About the same time I lost a plant I had on a warm wall in a seaside garden, and a plant of the white variety Constance Elliot also succumbed. Other experiences make me think that it is hardly worth while to attempt to grow the Passion Flowers in the North, much as one would like to do so, though they may do in a few specially favoured places.—S. ARNOTT.

Sweet Peas: The Question of Disease.—The present offer of the National Sweet Pea Society's gold medal, together with a sum of money by that body, to the originator of a cure for that devastating disease known—for want of a more specific name—as "streak" points to the alarming extent to which the trouble has spread. So far no cure has been forthcoming, presumably chiefly by reason of failure to diagnose the cause of the trouble. A few so-called remedies have been tried, but without permanent result. My own humble opinion is, however, that the cure will not come through medicinal measures, which are at the best but palliatives. Careful observation in my own case has gradually evolved a deduction that between the rich and generous feeding—I had almost said over-feeding—and rigid disbudding and cutting down practised in order to obtain big—and often coarse—blooms for the exhibition table, together with the too rapid multiplication of new varieties, and the disease under notice there is a definite connection. Working on this thesis, the conclusion has been reached, by actual experience, that disease is somewhat less prevalent among naturally and normally grown plants than among those specially treated for exhibition purposes. To myself, therefore, the inference seems clear, and I suggest that the essential aim should be to regain possession of the plant's natural original constitution in order to replace that which has been, generally speaking, artificially obtained. This will, of course, take considerable time. Granted; but a

disease which has now been with us in a more or less degree practically since the commencement of the rise of the flower in popularity as an exhibition subject cannot be mastered hurriedly. As to the actual process of the suggestion put forward, a move in the right direction might be made by horticultural societies holding conferences on the subject, inserting appeals in their schedules, circularising their members, or in other ways offering suggestions. Many of the trade growers, too, would need approaching; and conferences of judges might be useful. To obtain a new lease of healthy life for our beautiful annual I would even suggest the elimination of competitive classes of Sweet Peas from our schedules for a time. No effort can be too great tending towards purification of the seeds and plants.—B. W. LEWIS.

GARDENS OF TO-DAY.

CAMPSEA ASHE, SUFFOLK.

AT a period such as this, when the Government of Great Britain is in the minds of the English-speaking race the world over, it seems appropriate to publish a few particulars of the gardens at Campsea Ashe, the country residence of the Right Hon. J. W. Lowther, P.C., M.P., Speaker of the House of Commons. As those who are familiar with horticultural matters know, the Speaker is very keenly interested in gardening, and it is through his personal kindness that we are able to give our readers some idea of the beautiful grounds that surround his country seat. It was a scorching hot day in July when we were privileged to visit Campsea Ashe, which is situated within a few miles of the ancient town of Wickham Market, and under the guidance of Mr. Andrews, the head-gardener, who has held the position for twenty-seven years, we spent a most enjoyable and interesting day.

Of the mansion itself, which dates back to a remote period, it is not necessary to say more than that it is situated amid spacious lawns and fine trees, so that it forms a restful resort for the Speaker and Mrs. Lowther when the relaxation of their strenuous duties enables them to take a well-earned rest. From the north entrance we find a charming view between tall Yew hedges and a beautiful avenue of Lime trees, and it may be of interest here to note that Mr. Andrews, in making some alterations last spring, found it necessary to move part of one of the Yew hedges to another position, a feat that was successfully accomplished, notwithstanding the fact that the plants were over ten feet high and of considerable age. On the west and south fronts the house has as a surround beautiful, well-kept and spacious lawns, in which stand some of the finest Cedars in the country. The tallest of these is about one hundred and three feet high, while another giant has a perfect trunk with a girth of 21 feet, 6 feet from the ground. Situated about sixty yards from the south front is a fine old Hackberry tree, *Celtis occidentalis*, one of the few that exist in this country, and near by stands, sentinel-like, a magnificent Copper Beech, a tree that any owner would be proud of. In this direction the lawn leads down to a magnificent Bamboo hedge some nine feet high and as much in diameter. This, Mr. Andrews assured us, had all been obtained from one plant of *Arundinaria anceps*, which in a subsequent conversation with the Speaker we learned was sent by his brother, Sir Gerard Lowther, from the Japanese Legation in Tokio in 1895. We doubt if there is a hedge of its kind to equal it anywhere in the United Kingdom.

On the west front the lawn leads to a very charming and well-kept oval-shaped bowling green, which is surrounded by a tall and quaint clipped Yew hedge, towering in some places to

a height of over twenty feet, part of it being shown in one of the illustrations. At the far end of the bowling green some very fine Cedars form a restful arch, and are a striking tribute to the foresight and good taste of whoever was privileged to plant them. On the right of the bowling green one comes upon two slightly sunk gardens, one consisting of flower-beds set in verdant turf and filled with blazing plants of *Pelargonium Paul Crampel*; and the other a charming Rose garden replete with rambler and bush Roses, many of them being the old-fashioned fragrant sorts that in too many places have had to give way to more modern, though less pleasing varieties. Passing along through the Rose garden and down some stone steps, the visitor comes to a charming little rock garden that owes its existence to the suggestion of Mrs. Lowther and the ingenuity of Mr. Andrews. Subsequent to the

formal garden with Lily pool in the centre, a portion of which is shown in one of the illustrations. The retaining wall is of old red brick, to harmonise with the dwelling-house, the paths being well laid with old paving-stones. Between these the beautiful little Maiden Pink, *Dianthus deltoides*, was flourishing as we have seldom seen it do, while dwarf Campanulas, *Myosotis*, *Alyssum*, Iceland Poppies, Sedums and many other kinds of low-growing plants have also been cleverly inserted so as to give a pleasing and restful effect. In the Lily pool we found a number of beautiful hybrid *Nymphæas*, such as *ellisiana*, *robinsoniana* and *odorata rosea*, just opening their first flowers as an earnest of the display that was to come later. Two broad terraced borders surround the Lily pool, the upper of these being planted with pink Ivy-leaved *Pelargoniums*, and the lower with *Heliotrope* Mrs. Lowther, a very



MIXED FLOWER BORDERS IN THE SPEAKER'S GARDEN.

Speaker taking over the gardens, this was a rough woodland corner, but now it provides a congenial home for many kinds of dwarf vegetation. *Dianthus deltoides* was doing particularly well, as were many of the choicer Campanulas, Forget-me-nots and a host of other plants. In the centre, and bordered by sandstone blocks, is a miniature pool, in which some of the dwarf *Nymphæa* hybrids were flourishing and giving excellent promise of a floral display later in the season. Under an overhanging tree a large stone slab, arched with two ancient whalebones, forms a favourite seat of the Speaker on hot days, and it does not need a very vivid gift of imagination to believe that this simple seat, set amid such peaceful and pleasant surroundings, is far more congenial to him than the more exalted and highly respected seat in another and more strenuous place.

On the left of the bowling green we find a second modern addition to the grounds, viz., a sunk

beautiful and vigorous variety that originated at Hutton John, the Speaker's former residence in Cumberland. At one end of the Lily pool, and plainly shown in the illustration, is a fine old lead tank bearing the date 1755, and on pedestals by the steps leading from the house are two magnificent bronze vases that were, we believe, rescued from obscurity by the Speaker some years ago.

Running from the east side of the mansion, the visitor finds a beautiful terrace walk under one of the finest clipped Yew hedges in the country. This hedge is over a hundred yards long, at least twenty-five feet high and over twelve feet in diameter. Bordering the other side of the walk is a long, formal Lily pond with sloping grass banks, and on the surface of the water beautiful Water Lilies nestle in abundance, while numerous carp disport themselves in the crystal water.

The old kitchen garden, which is divided from the pleasure grounds by the Bamboo hedge already

referred to on the one side and the long Yew hedge on the other, is now mainly devoted to flowers, borders of choice herbaceous plants meeting the visitor at every turn; while intersecting the various plots are Rose pergolas and pillars, supporting such excellent varieties as American Pillar, White Dorothy Perkins, Hiawatha and Rosa moschata alba, intermingled with good Clematises. By the fruit garden we were pleased to find a hedge, some eight feet high, composed of the hardy Fuchsia Riccartonii and Rambler Rose Dorothy Perkins, the two forming a very effective and pleasing combination. Rose Fellenberg is largely used here as informal hedges, and a pleasing combination, part of which is shown in the small illustration on page 442, was brought about by a large plant of Buddleia variabilis veitchianus and another of Rosa moschata alba, the lilac blue flowers of the former harmonising perfectly with the white Roses.

One might dwell long and pleasantly on the many beautiful features of the woodland surrounding Campsea Ashe, did space permit. It must suffice, however, to say that one of the best silver variegated Elms we have ever seen, a noble tree some seventy-five feet high, and a magnificent specimen of the comparatively new Buddleia Colvillei, with its large clusters of rose-coloured but unpleasantly scented flowers, are to be seen.

In the plant-houses we were charmed with a splendid collection of Show and Regal Pelargoniums, old-fashioned plants that we understand Mrs. Lowther is particularly fond of, and which we so seldom find well grown nowadays. Bougainvilleas, Orchids, Bouvardias, Lilies, Nerines and many other flowering plants are also well grown, and the fruit-houses, with their splendid crops of Muscat Grapes, Peaches, Apricots and Melons, provide excellent testimony to the skill of the head-gardener. Campsea Ashe is a place over which to linger lovingly, and those who are privileged to visit this restful spot will find more than a little that is beautiful and interesting in the charming grounds and gardens.

AMONG THE ROSES IN EARLY AUTUMN.

To have our late Roses at their best demands a little special attention now. Do not let any stale flowers or seed-trusses remain. Cut off as much as possible of the old and partly decaying foliage, as this is only too apt to retain insects and red rust. Free use of the hoe and a thorough watering are also of great benefit, and sure to pay. It is now also that mildew is more likely to appear, owing to the great changes of midday and early morning temperatures that are entirely beyond our control, and I advise a free use of the various deterrents to this disease, which will otherwise spoil the deeper-coloured foliage that

is characteristic of the autumnal growth of many varieties. Where red rust or black spot exists, carefully collect and burn all fallen leaves, also cut off any affected ones that may still hang upon the plants. One cannot be too persevering in this just now and onwards, or the germs will increase rapidly. Remedies and helps against these diseases have frequently been given, and should be followed immediately the foe appears.

A little summer pruning may be done, especially among the climbers that flower well only once during the season. It is better to cut away the exhausted wood now than to let it



VIEW IN THE SUNK GARDEN AT CAMPSEA ASHE. THE YEWS IN THE BACKGROUND ENCLOSE THE BOWLING GREEN.

continue to draw nourishment, only to be cut out early next year at the usual pruning-time. Thinning out now gives a chance for healthier and better matured growth of the long maiden rods that are of greatest service early next season. Look over the earlier-worked buds, and rebud where failures are discovered. This may be done until early September during most seasons, so long as the stock is in active growth. Some of the early buds, too, will need the ties loosened, especially if they have commenced new growth upon their own account, as several early worked buds do.

A. P.

SWEET PEA NOTES.

Autumn Culture.—The season, now fast waning, causes the Sweet Pea grower to turn his thoughts to the future, and he does so with the hope that next year's weather will be a little kinder and more congenial to the Sweet Pea than the present season has been. Certainly for the past four years the weather has not been favourable to its luxuriant growth, and the devotees of the Sweet Pea have had many anxious moments. The year 1911 was one of blazing sun and prolonged drought; 1912 followed with a sunless summer and prevailing cold winds;

the dismal weather of last year is still fresh in the memory of all; while this season has brought such a plague of green fly which, in many cases, has totally defied all efforts of extermination. Yet, notwithstanding all these adverse circumstances, a decided improvement in quality of flower has been the outstanding feature in almost every show, and one has been curiously interested in asking the methods of culture adopted by the successful exhibitors. With very few exceptions, one found that "autumn culture" was the secret of their success. I believe that comparatively few growers realise fully the value of autumn work in the culture of Sweet Peas, yet in such weather as that of this year the spring-sown plants have not had a chance. It would be well if more growers recognised that their operations would have a greater chance of success if begun earlier.

Purchase of Seed.—Many growers not only neglect to prepare their soil in the autumn, but they also postpone ordering their seeds until the early months of the year, when of necessity the supply is greatly diminished. Hence, all along, their chances of success are seriously hampered. The enthusiast, of course, has selected his list of novelties that he intends to grow next season from the exhibits of the shows he has visited, and doubtless he has likewise ordered them. Yet the ordinary grower also is well advised to get his seeds as early as possible, and the following dozen varieties (seeds of which can be procured from any firm whose name is in the advertisement columns of THE GARDEN) can be recommended: Dobbie's Cream,

Maud Holmes, Elfrida Pearson, Elsie Herbert, Etta Dyke or King White, Illuminator, King Manoel, Lavender George Herbert, Margaret Atlee, May Campbell, Mrs. Cuthbertson and Rosabelle.

Preparation of Soil.—This has been fully dealt with in previous notes, but one would reiterate that the work must be done before the winter rains make it impracticable. Again, it is absolutely impossible to over-estimate the importance of deep cultivation in relation to the conservation of soil moisture, which determines growth equally as much as, if not more than, the amount of plant food in the soil.

Autumn Sowing.—One would like to write of the many mistakes one has made, and, maybe, such an article would not be without profit, for in the growing of the Sweet Pea every mistake, duly recognised and repented of, is really a step onwards and portends future success.

The Time of Sowing is of vast importance. Seeds should not be put in too early; yet, on the other hand, unless the plants are well rooted before winter is well in, the seeds might with more profit have been kept in the seed packets. I started growing seeds from the same packet in various ways, sowing at varying periods from July onwards. Although once seeds sown in July were a success, yet unless a grower, like myself, experiments for the pleasure derived therefrom, it cannot be recommended. I record the experiment simply for its interest, and also because it is illustrative of the possibilities when soil and weather conditions are in harmony. Had the soil been a heavy clay, the plants would have "damped off." Plants from seeds sown in July were planted in well-cultivated, porous soil and cut down in September, new growths shooting up from the base. These withstood the mild winter that followed, growing away and yielding magnificent flowers in early May. However, September and October are the best months for autumn sowing, and the following plan, to my mind, is the best, and can be carried out by any grower with a fair amount of space and time at his disposal.

Planting the Seeds.—Chip all hard-skinned seeds to get a regular and quick germination, and sow in boxes or pots (I used pots) the last week in September. By the end of October the plants will be well up and able to withstand a fair amount of cold. Do not imagine that you can improve them by applying heat. The plants do not require "coddling," and will not suffer, even if frost comes, so long as they have plenty of drainage. Stand in a frame on a bed of ashes or shingle, and if they are frozen, just prevent the sun from shining directly on them until the frost is gone, and you will find that the plants thus treated will come scathless through the winter.

In January prepare a cold frame as follows: On a bed of ashes place a layer of well-decayed manure; on this put upturned turves, following with a shallow covering of about an inch of good potting soil. Into this plant the seedlings, allowing a space of 6 inches between them. You will find that the basal shoots will grow rapidly and the roots will find their way through the turves into the manure at the bottom. You will have to put small sticks to these plants, as it is important that each plant be kept separate from the other and not allowed to become entwined together. When the time for planting out arrives, it will be a very simple matter to remove the plants; the roots, having formed a compact network

in the turves and manure, will come clean away from the ash bed, and strong, sturdy plants, capable of growing right away, will be obtained. Should it be impracticable for the frame to be thus used, then it is important that all autumn-sown plants, whether in boxes of pots, should be repotted in fresh soil as early in January as possible.

Outdoor Sowing.—In gardens where the soil is light and through which moisture passes away readily in the winter, Sweet Peas may be sown directly into the soil, and they stand little or no risk of dying off, but they start into growth in the spring already well rooted and are better able to withstand the hot weather that may follow. But in heavy soil it is a mistake to sow in the open; the seedlings will "damp off" and labour is lost. The safer method is to raise the

THE ROCK GARDEN IN AUTUMN.

WHILE everyone who rock gardens at all knows that the greater flower wealth of that department is to be found from March to June inclusive, there would certainly appear to be an ever-increasing number who desire as much flower beauty as is possible during the autumn months. The desire is both legitimate and good, since, if carried into effect with as much zeal as in now displayed in the embellishing of the rock garden at other times, it would yield results that would surprise not a few. True, as already hinted, there is not a tithe of the flower beauty for the autumn months that is possible for spring, though



A ROCK GARDEN SCENE IN SEPTEMBER, WITH CAMPANULA MURALIS IN THE FOREGROUND FLOWERING FOR THE SECOND TIME.

plants in a frame and to treat them as before advised. S. M. CROW.

WATSONIA COCCINEA.

ONE of the most beautiful plants we have grown here this season is *Watsonia coccinea*, a really fine subject which I should like to commend to others. The colouring is somewhat similar to the ground colour of *Lilium tigrinum*, but is a shade more brilliant, and the black spots are entirely absent. The anthers are deep black, and, contrasting against the bright-hued blossoms, are very pleasing. *W. coccinea* with us flowers in late July with the beautiful white *Ardernei*, to which it forms a very pleasing companion. Like *Gladioli*, the corms need lifting each autumn to ensure their safety during the winter months.

Clacton-on-Sea.

P. S. HAYWARD

it is equally true that what exists is not made sufficiently good use of, and until this is brought together and utilised to the best advantage we shall never realise its worth. So far the few good autumn-flowering rock garden plants have hardly had a fair hearing. In other words, in not a few instances they have had to be content with a moderate or sparse representation. Of late, however, signs have not been wanting of a change in this direction, and the enquiries received from time to time indicate that there is a desire to extend the flowering season as much as possible, or at least to make the best use of the material which even now exists. To some extent, by an endeavour to make autumn rock gardening a feature and by planting in freer masses instead of small, isolated groups as formerly, something serviceable might be accomplished. Take, for example the genus *Campanula*, and, selecting from it such

as fragilis, isophylla in all its forms, Barrelieri, Stansfieldii, garganica in variety, Hillside Gem, Hendersonii, Tymonsii, Profusion in two varieties, to say nothing of the late comers of carpatica, we have not only some of the more showy of the rock garden Bellflowers, but also some of the more profuse flowering. Then there are hardy Heaths of importance and beauty, Crocus species in considerable variety, very beautiful hardy Cyclamen, together with Polygonums, Sedums, Colchicums, Sternbergias, Zauschnerias and others, which, if rightly employed, would go a long way to ensuring a better display than is usually seen. The thing to do in the case is to plant these autumn bloomers with the same freedom or lavishness as is done with those that flower at other seasons, rather than continue to subordinate them or permit but a meagre representation. To some extent our public gardens might assist in this direction, and where rock gardens exist, by specialising in the good things, show what is possible. So fine a Saxifrage as S. Fortunei could be made quite a feature, and if not absolutely hardy in all Northern gardens, is worthy of freer representation in many others. In certain instances recourse might be had to some of the dwarf-growing, little-known annuals, late sowings of which would provide free masses of colour at small cost. Then there are the Violettas, an invaluable race in themselves well worth specialisation, and of even greater value perhaps in Northern than in Southern gardens. Then, of course, it would be well to remember the more profuse-flowering alpine, as Androsace lanuginosa or Campanula muralis, which not infrequently provides quite a good secondary display of flowers. Lastly, the rock gardener should take note of thin carpeting subjects, and that section in particular which, having played their flower part earlier in the year, are capable of being turned to account in other ways, though best of all, perhaps, in preserving the flowers of Crocus at their time of blossoming, and over whose bulbs they may be planted with that object in view. In these and in other ways much might still be done to extend the interest of the rock garden far away into August and September each year.

THE MOURNING IRIS.

(I. SUSIANA.)

THE above Iris is perhaps the most striking of all the family, and in common with I. iberica and all the so-called Oncocyclus Irises, its successful cultivation presents many difficulties. With this plant it is true one often gets excellent results the first season, but it is only on odd occasions that one succeeds in keeping it in good health for a number of years. There is little doubt that most of our failures to keep this plant in good health are due to imperfect ripening of the rhizomes. Plenty of lime in the soil is said by some to be the secret of success; but my experience with this plant in various parts of the country has not proved this to be always the case. Other experts hold that poor soil is the secret. This I do not agree with. Good drainage it certainly must have, also a warm, sheltered position. If one can say anything definite regarding growing it successfully, good cultivation during its growing season and a regular roasting during its resting period is the method most likely to meet with success. Thus, to ensure the latter conditions the plants during their resting period should be covered with glass to keep them perfectly dry. If this is not possible, they should be lifted and exposed to the sun for a time in a cold frame, where they can be kept dry. This method, good cultivation and thorough ripening I have also found successful with the shy-flowering bulbous I. tingitana.

A good situation for I. susiana is a warm, sunny border at the foot of a south wall,



IRIS SUSIANA, OR THE MOURNING IRIS.

although in warm, sheltered positions in the South it sometimes does well in the open. Care should be taken not to plant it too deeply; in fact, the rhizomes should be no more than covered. Where it does not succeed outdoors, this Iris may be grown in pots for greenhouse decoration. The new Regelio-cyclus hybrids are very beautiful, and are apparently easier to grow than the species.

J. C.

LANTANAS.

WHILE these are troublesome weeds in many of the warmer regions of the globe, some of them, especially the garden forms, are here of considerable value for decorative purposes. They have within the last few years come well to the front for bedding out during the summer, which is not at all surprising, as they are very showy when at their best, and readily lend themselves to our varied climate. Two years ago, when so many bedding plants suffered from the intense heat, the Lantanas were in every way satisfactory, and though last season was wet and cold, they were very fine. There are a great number of varieties, one of the best known being Lantana salviaefolia, more generally known as L. delicatissima. This, which attains a considerable size, has bright violet purple blossoms. The best of the rich-coloured varieties is the deep scarlet Incendie, while Drap d'Or is a good yellow. It is not alone as bedding plants that these Lantanas are of service, for when a greenhouse has to be kept gay with flowers at all seasons they may be depended upon to give of their best, and that, too, over a lengthened period. Lantana salviaefolia is a good roof or rafter plant, whose long, slender shoots will hang down for a considerable distance and flower for months together.

E. H. JENKINS.

Name.	Height.	Aspect.	Soil.	Predominant Colour.	Flowering Period.	Method of Increase.
Campanula Barrelieri	Trailing..	Sunny ..	Gritty loam..	Blue.....	Aug.-Sept.	Cuttings, seeds
C. fragilis	" ..	" ..	" ..	" ..	July-Sept.	" "
C. garganica (all varieties) ..	" ..	Cool	Moist loam ..	" ..	" ..	" "
C. Hendersonii	2ft.....	Open	Rich loam ..	" ..	" ..	Cuttings "
C. Hillside Gem	" ..	" ..	" ..	" ..	July-Oct.	" "
C. muralis (second flowering)	1ft.....	" ..	" ..	" ..	July-Aug.	Cuttings, division
C. Profusion (two varieties)..	Trailing..	Cool	Moist loam ..	" ..	" ..	Cuttings
C. Tymonsii	1ft.....	" ..	" ..	" ..	" ..	" "
Ceratostigma plumbaginoides	2ft.....	" ..	Peat loam ..	Dark blue ..	Aug.-Oct.	Division
Colchicums of sorts	1ft. to 1ft.	Open	Rich loam ..	White & lilac	Aug.-Sept.	Seeds, division
Crocus medius	1ft.....	Sunny ..	Sandy loam..	Violet	Sept.-Oct.	" "
C. nudiflorus	1ft.....	" ..	" ..	Lilac purple ..	Aug.-Sept.	" "
C. ochroleucus	1ft.....	" ..	" ..	White	Sept.-Oct.	" "
C. speciosus	1ft.....	" ..	" ..	Violet purple ..	Aug.-Sept.	" "
C. zonatus	1ft.....	" ..	" ..	Lavender ..	Sept.-Oct.	" "
Cyclamen neapolitanum	Carpeting	Open or light shade	" ..	Rose pink ..	Aug.-Sept.	Seeds
C. n. album	" ..	" ..	" ..	White	" ..	" "
Erica cinerea	2ft.....	Open	Peat and loam	Reddish	Sept.-Oct.	Cuttings, layers
E. c. alba	" ..	" ..	" ..	White	" ..	" "
E. c. atropurpurea	" ..	" ..	" ..	Rich purple..	" ..	" "
E. c. atrosanguinea	" ..	" ..	" ..	Deep red ..	" ..	" "
E. c. coccinea	" ..	" ..	" ..	Bright red ..	" ..	" "
E. ciliaris mawiana	" ..	" ..	" ..	Deep red....	Aug.-Oct.	" "
E. vagans	2ft.....	" ..	" ..	Pink	" ..	" "
Polygonum affine	2ft.....	" ..	Loam	Reddish	" ..	Division
P. vaccinifolium	Trailing..	" ..	Sandy loam..	Pink	Sept.-Nov.	Cuttings, division
Saxifraga Fortunei	1ft.....	" ..	" ..	White	Sept.-Oct.	Division
Sedum Ewersii	Tufted ..	" ..	" ..	Pink	Aug.-Sept.	Cuttings
S. kamtchaticum	" ..	" ..	" ..	Yellow.....	" ..	" "
S. pulchellum	1ft.....	" ..	" ..	Pink	" ..	Division
S. Sieboldii	Tufted ..	" ..	" ..	" ..	" ..	Cuttings
S. spectabile in variety	1ft. to 2ft.	" ..	Deep loam ..	Pink and red	" ..	Division
S. spurium in variety	Trailing..	" ..	Ordinary soil	Various	" ..	" "
Sternbergias of sorts	1ft.....	" ..	Sandy loam..	Yellow.....	" ..	Seeds, division
Violettas of sorts	" ..	Cool spots	Loamy soils..	Various	July-Sept.	Cuttings
Zauschneria californica	1ft.....	Sunny ..	Sandy loam..	Scarlet	Aug.-Oct.	Division
Z. c. splendens	" ..	" ..	" ..	" ..	" ..	" "

GARDENING FOR BEGINNERS.

THE PROPAGATION OF SUMMER BEDDING PLANTS.

EVERY autumn a number of cuttings of the different kinds of bedding-out plants should be propagated. It is better to propagate in early autumn than late, providing the cuttings are available. We generally want cuttings and a fine display of blossom in the garden at the same time, and this is one reason why propagation is deferred as long as possible. In every instance the shoots that make the best cuttings are those that do not possess flowers, so that by judicious selection the cultivator can obtain the cuttings without marring the general good appearance of the beds of plants.

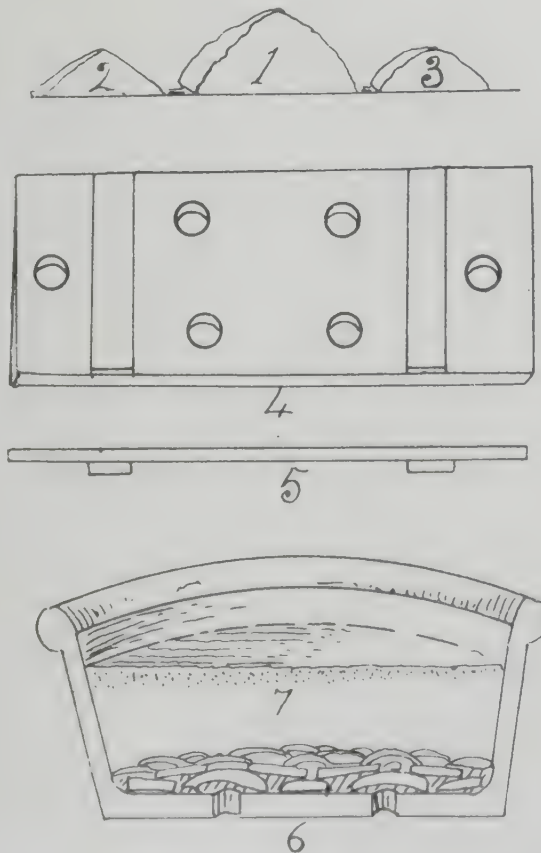
How a Cutting Forms Roots.—The cultivator should understand what actually happens after he has taken a cutting and inserted it in some soil. If he does, he will know how to treat the cuttings throughout the winter so as to keep them healthy. If, in dealing with the majority of cuttings, the stems are severed between the joints, the lower portion of the stem will decay and the cutting will be lost entirely. If, however, the stem is severed through the lower part of a joint, it will not die if properly treated, but form roots from the node or joint. If too much moisture is given, these very tender roots will perish; also, if they are allowed to remain in a very dry soil for a long time, they will gradually shrivel up and adversely affect the base of the cutting itself. No amount of moisture or care will, in many instances, result in saving the cutting. Very soft, sappy-stemmed cuttings are not suitable, because in many cases the stems would decay instead of forming a callus and roots. Very hard wood is not suitable, because

it would remain a long time without forming roots, and, even after growth commenced, the new shoots would be stunted and generally unsatisfactory throughout the next season or until the end of the next summer. With regard to the length of the cutting, it will be safe to insert one-third under the soil. Half an inch would not be deep enough to insert a 5-inch-long cutting of Zonal Pelargonium, but it would be quite deep enough for a 2-inch-long one of Lobelia or Gazania.

In Fig. A, No. 1 shows a Coleus cutting prepared for insertion. No. 2 depicts one of an Abutilon, the stem and lower leaf of which must be severed at the dark cross lines before it is ready for putting in, and any flower-buds on cuttings of this kind must be pinched off. No. 3 shows a prepared cutting of a Mesembryanthemum, and No. 4, of a Gazania. These will be sufficient to show the beginner how to proceed when selecting and preparing cuttings generally.



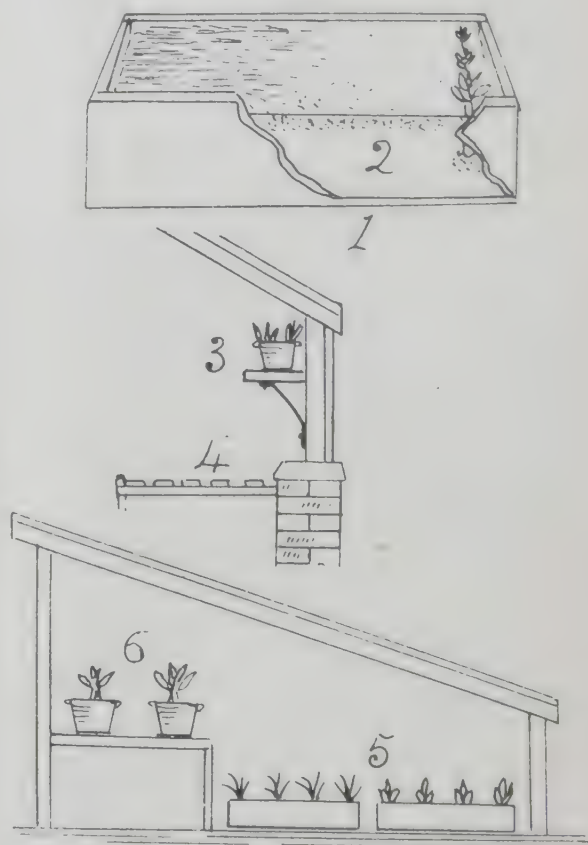
A.—VARIOUS CUTTINGS PREPARED FOR INSERTION.



B.—CUTTING BOXES AND PANS MUST BE MADE READY BEFOREHAND.

The Compost, Boxes and Pots.—Loam must form the chief ingredient, as shown at No. 1, Fig. B; coarse sand, No. 2; leaf-soil, No. 3. These parts should be in proportion, as depicted by the heaps. No. 4 shows the bottom of the cutting-box with holes for drainage, and strips of wood nailed across to increase the strength and preserve the bottom from decay by close contact with the ground, as illustrated at No. 5. No. 6 shows the drainage material and soil, No. 7, in a pan ready for the insertion of cuttings. All pots, boxes and pans must be prepared in a similar way. In Fig. C, No. 1 represents a cutting-box, and No. 2, the soil surfaced with sand in which to insert the cuttings. Good positions for the cuttings are on shelves and stages in a greenhouse, as shown at Nos. 3 and 4 respectively, and Nos. 5

and 6 in a frame. Zonal Pelargoniums will not be adversely affected if exposed to sunshine and plenty of air; but the majority of the cuttings



C.—IT IS IMPORTANT TO FIND GOOD POSITIONS FOR THE CUTTINGS.

will succeed best if lightly shaded and kept free from draughts.

G. G.

ROSE GRAND DUC DE LUXEMBOURG.

ALTHOUGH this beautiful variety has one very bad quality—that of hanging its head—there are few Roses that have charmed me more. It possesses such a lusty vigour and delightful habit that these alone would secure it consideration; but when we examine its colour we discover the secret of its fascinating so many individuals. It is the two wonderful colours that exist in each flower that command attention, the inner side of the petals being clear rosy pink and the outer brilliant lake. The nearest approach in colouring is Mrs. E. G. Hill, and this variety has the merit of producing its flowers erect, which makes them more decorative, yet there is lacking that vigour which we admire so much in the Grand Duc. I cannot but compare the growth to that of Viscountess Folkestone; indeed, the two would make charming companions. We are getting quite a number of Roses of these two colourings, but I think Grand Duc de Luxembourg will well hold its own. It is interesting to note how each raiser has his own special strain. Messrs. Soupert and Notting, the raisers of the Rose under notice, have issued two that bear a resemblance to Grand Duc de Luxembourg, namely, Mrs. E. G. Hill and Alberto N. Calamet; and Messrs. A. Dickson and Sons with their golden set, such as Mrs. Peter Blair, Harry Kirk and Duchess of Wellington, all bearing evidence in their growth of a kindred relationship. P

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Late Vines on which heavy crops are ripening must be freely supplied with moisture at the roots, and the ventilators left slightly open during the night in order to dispel moisture. If dull weather sets in, a little fire-heat may be employed with the same object in view. Ventilation in the early morning is of great importance to Grapes during the ripening stage, especially at this season. Lateral growth must be regulated over the trellis as evenly as possible, and never allowed to become so dense as to interfere with the proper circulation of air or to deprive the berries of the necessary nutriment to bring them to a perfect finish.

Plants Under Glass.

Lilium longiflorum.—If flowering plants are required in midwinter, no time should be lost in potting the bulbs, and as these have been retarded, they ought, as soon as they are delivered, to be placed in pots which are not too large. The soil may consist of three parts sandy loam and one part leaf-soil. Earlier plants which are showing flower-buds should be examined, and if aphides are present on the foliage, the house ought to be fumigated at once.

Lily of the Valley.—Retarded crowns of this favourite flower may be potted up now, and should be in bloom during October. The crowns must be potted as soon as they are received and kept in an even temperature, as any check in this way will be very injurious to them. A light covering of Cocoanut fibre refuse may be placed over the pots in order to keep them in an even state of moisture.

Bouvardias in cold frames should be freely supplied with liquid manure. In order to promote clean, healthy growth and, consequently, fine flowers, give plenty of space between the pots and keep the lights off during the night, as heavy dew will have a beneficial effect on the plants, providing the temperature is not too low.

The Flower Garden.

Narcissi.—If plantations of these are contemplated, the bulbs should be selected and planted with as little delay as possible, for although they will flower if planted as late as December, far better results are to be obtained by planting now. Narcissi may be grown in almost any position in the garden or pleasure grounds, and the stronger-growing varieties have a very pleasing effect when planted in grass under deciduous trees or in front of the shrubberies. In planting dwarf-growing varieties, the bulbs may be placed 2 inches deep, but for tall-growing sorts twice that depth is not too much.

Propagating Bedding Plants.—This work should be pushed forward as quickly as possible. Fuchsias, Heliotropes and similar plants may be propagated in a close, cold frame within a few inches of the roof glass. If the frame is kept close and sufficient shading provided, there will be no difficulty in securing a good stock of plants. Frequent light syringing is necessary to keep the cuttings from flagging. In selecting cuttings, long pieces should be avoided, as the best results are obtained from short, stocky tops, which strike much quicker and make better plants in the end.

Violets.—These plants should be frequently damped overhead in order to keep the foliage healthy. A light dusting of soot will also do much to keep red spider in check. Remove worthless side shoots, and as this work proceeds the crown shoots should be selected with a view to securing stock plants for the following year. If these cuttings are planted in some sheltered situation about six inches apart, they will make valuable plants ready to put out in April.

Violas ought to be cut over and the cuttings taken in October. Slight shading will be necessary until the roots take possession of the soil, after which the lights may be removed until sharp frost sets in.

The Fruit Garden.

Strawberries.—In making new plantations of Strawberries it should be remembered that these plants are deep-rooting and require a depth of 2 feet of good rich soil to grow them to perfection. When the ground is being prepared, a quantity of

farmyard manure should be incorporated with the soil, which must afterwards be trodden when moderately dry. When the plants have been put out, a liberal supply of water ought to be given, and this must be continued until the roots have re-established themselves.

Fruit Trees.—The roots must not be allowed to become too dry now, or the prospect of a good crop next season will be much reduced. Keep the breast-wood cut back to within a few leaves of the basal buds in order to mature them and encourage the formation of fruit-spurs. The leading shoots should be kept nailed to the wall to secure them against rough wind.

The Kitchen Garden.

Sowing Cauliflowers.—Now is the time to sow seeds of Cauliflowers for wintering in cold frames with a view to planting them out at the beginning of April. From these plants a good supply should be available by the beginning of June, providing suitable varieties are selected. For this purpose I find Great Dane, Magnum Bonum and Early London answer the purpose well, and come into use in the order named.

Winter Spinach.—This may still be sown, and a sheltered position should be chosen for it. If the ground is dry at the time of sowing, the drills may be watered the night previous. This will hasten the germination of the seeds by several days.

Celery.—Give liberal supplies of water to all Celery plants, and earth up early plantations as it becomes necessary. Tie the foliage with some soft material until the soil has been placed in position, after which the ties may be carefully removed.

Leeks.—The early plants will benefit by an abundant supply of manure-water. Keep the soil stirred between the plants, and earth up as it becomes necessary.

Keep the Hoe at Work among growing crops so that all weeds may be destroyed before the season is too far advanced.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Spring Cabbage.—Preparations may now be made for planting this important crop. For the earliest supplies a warm border should be selected from which early Potatoes have been gathered. To ensure a sturdy growth, simply level the ground, which afterwards ought to be made fairly firm by treading. Plant out in rows about fifteen inches apart and 9 inches between the plants. Larger-growing sorts will, of course, require more room. Guard against grubs by giving a dusting of soot and lime occasionally.

Potatoes.—Continue to lift and store such varieties as appear to be fully grown, as, if wet weather sets in, disease and scab are sure to make their appearance and cause much damage to the tubers. In storing, all diseased tubers should be carefully picked out, and small sets may be collected and placed apart, when they can be looked over and graded on wet days.

Turnips.—Although it is just late enough in most places in the North to make a sowing after this date, still, if a vacant space is available in a sheltered part of the garden, it will be worth while to sow a few rows of these, which would come in useful even if the Turnips only grow to the size of half-a-crown. With the increased moisture at this season they will come through in a few days. To hasten growth, give the ground a dusting of Peruvian Guano, and with a mild autumn they will grow on till November.

Celery.—As frost is often experienced in the North any time after this date, the work of earthing up the main crop should have immediate attention. It will be more than ever necessary at this time to select a dry day for the work, so that the soil may be reduced to powder, and care must be taken that no soil gets into the hearts of the plants.

The Flower Garden.

Begonias.—Where this year's seedlings were planted out in the reserve garden, many of them

may be lifted carefully and potted. These will bloom for some time yet and add a rich colour in the greenhouse. The remaining bulbs must be left until growth is completed.

Early Flowering Chrysanthemums.—Like the foregoing, plants coming into bloom can be lifted and potted for furnishing the greenhouse and conservatory, and thus give a supply of flowers until the pot-grown plants come into bloom. Although these Chrysanthemums are very accommodating, they must be lifted with good balls of soil attached, and be well watered and shaded heavily until they recover from the check of removal.

Plants Under Glass.

Humea elegans.—Seed of this graceful plant which was saved from home-grown plants should now be fit for sowing. Place the seed-pan in a moderate temperature, and, as already pointed out, careful watering is essential from the very start. When the seedlings are large enough to handle, pot them singly into 2½-inch pots in a mixture of loam, leaf-mould and sand. Keep the plants close for a few days until they are well rooted.

Bulbs for Forcing.—Where early flowers of Tulips, Hyacinths and Narcissi are in demand, a start should be made in getting the bulbs potted. However early they may be wanted, they must not be unduly excited at the start. After potting, place them against a wall and cover with 3 inches of sifted ashes. If the soil is fairly moist, no water will be required until they have started into growth. A number of boxes may also be filled with Daffodils from the border, Golden Spur and Trumpet Major being useful varieties for this work. Until growth commences they must be treated in the same way as pot-grown bulbs.

Carnation Souvenir de la Malmaison.—The layers of this Carnation will now be ready for potting, and great care must be exercised in this operation. Endeavour to get good balls of soil attached, and put them into suitable-sized pots. After potting, stand the plants in a good frame until they are established; but care must be taken that too much moisture is not allowed to settle on them. Should green fly make its appearance, syringe slightly with Quassia Extract, as fumigation is not always practicable in frames.

The Fruit Garden.

Pears.—Now that most of the small fruits have been gathered, the nets should be used to protect wall fruits, particularly Pears. Extra choice fruits should be supported by tying them up to the wires or branches. The same results would be obtained by using small muslin bags, but they are, to say the least of it, unsightly. Means should also be taken to guard against squirrels. They can nip off a Pear and make off with it with the most astonishing ease. We caught many last year entangled in the net.

Apricots.—As most of the fruits have been secured, the trees ought to be gone over, and any pruning necessary should be done now. Very often, when this work is delayed until the winter, a good deal of gumming results. It is quite obvious, however, that the earlier the work is done, the more good will result to the building up of next-year's buds.

Fruit Under Glass.

Peaches.—The earliest varieties will now have completed their growth, which will be seen from the plumpness of the buds. Where this is the case, open the ventilators to their fullest extent, so that the trees may have a complete rest. Trees that have carried heavy crops may still have liquid manure applied occasionally, and use the syringe only to keep the foliage healthy.

Figs.—The second crop will now be ripening, and in consequence the atmosphere must be kept somewhat drier. Any fruits produced after this date should be stripped off, as it is evident that they will have no chance of ripening. Any pot-grown trees requiring a shift should be seen to as soon as the fruits have been gathered, but guard against overpotting these.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE GARDEN.

No. 2234.—VOL. LXXVIII.

SEPTEMBER 12, 1914.

NOTES OF THE WEEK.

Competition for Tobacco Plants.—An interesting feature of the flower show recently held at Twynholm, Kirkcudbrightshire, was the competition for Tobacco plants. No fewer than twenty were exhibited. Tobacco is being cultivated for commercial purposes on a considerable scale in the district, and much interest is being taken in the crop in the vicinity.

Bottling Pears.—The best time to bottle Pears is when they are ready to pick, as the flavour of each variety is then much more pronounced; but these are also extremely good and palatable if picked before the fruits are properly matured, which often has to be done when the trees are overcrowded. In no case should the fruits be bottled if they are over-ripe in the slightest degree.

Royal Flowers for Scottish Hospital.—By the command of Her Majesty the Queen, Mr. J. Michie, M.V.O., the King's Commissioner at Balmoral, has intimated to the managers of Morningfield Hospital, Aberdeen, that flowers from the Royal Gardens at Balmoral and Abergeldie will be sent to the hospital once or twice a week. There is no doubt that the kindness of Her Majesty will be very highly appreciated by the patients at the hospital.

The Double-Flowered *Euphorbia caucasica*.—This is an excellent plant for the herbaceous border. It grows about two feet in height, and blooms in the South of England in the early part of August. It is somewhat like a *Lychnis* in its general appearance. The flowers are double and pure white, and are freely produced. Although we were assured that *S. caucasica* was the correct name, it appeared to be very like the old officinalis with double flowers. It was, however, of a more compact habit.

Sowing Parsley.—This is one of the most valuable herbs, being in demand the whole year round; but often during the winter months there is a scarcity of it. Liberal sowings should now be made in unheated frames. Plants raised from a sowing now, and under these conditions, frequently prove very valuable during severe weather in winter. Any seedlings that are now

ready to be planted out should be put in a row along a south wall or fence, and will be found of great value later.

A September-Flowering Alpine.—In *Viola cornuta* we have a showy plant for the rock garden in late summer or early autumn, but for some reason its merits are often overlooked, and it is frequently omitted from compilations on late-flowering alpine. It loves limestone, and is very suitable for growing among rocks or in steps of rock gardens. The subject of the illustration on this page is the white counterpart of this delightful *Viola*.



VIOLA CORNUTA ALBA, A LATE-FLOWERING PLANT FOR THE ROCK GARDEN.

Planting Small Bulbs.—Where it is possible to commence this operation, no time should be lost. All bulbs benefit by early planting, particularly small bulbs, which tend to dry quicker. Snowdrops, Chionodoxas, Scillas, Fritillarias, Muscaris and other small bulbs may now be planted in places that are at liberty. Beds that are filled with summer bedding plants will have to wait, not because it is beneficial, but because it is convenient.

Hydrangea hortensis.—To obtain dwarf plants for flowering in May and June, the cuttings should be taken now. Choose strong, short-jointed

shoots which have been grown in the open. Cut them below the third joint and remove the two bottom leaves, afterwards inserting them in small pots of sandy soil and placing them under a hand-light in a cool, close pit until sufficiently rooted. They may be wintered in a cool pit with plenty of ventilation. Pot into 5-inch pots about the end of January. If grown near the glass in an intermediate temperature, they should flower within 14 inches of the pot.

Vegetables for the Troops.—The military authorities are purchasing large quantities of farm and market garden produce, including Potatoes, Cabbages, Carrots, Onions and other vegetables, for the use of His Majesty's troops throughout the country. For the purpose of facilitating supply and of preventing, as far as possible, a scarcity of produce arising in one district while there is a surplus in another, farmers and market gardeners are urged to assist the War Office by stating the quantity of produce they have to sell at fair market price. Forms for the purpose can be obtained either from any post office or direct from the Board of Agriculture and Fisheries, 3, St. James' Square, London, S.W.

An Example Worth Following.—At Chard, on Saturday, August 29, a Patriotic Flower, Fruit and Vegetable Show was held in the Corn Exchange in aid of the Prince of Wales' National Relief Fund, when a sum of £40 was raised for it. The idea originated with Messrs. Jarman and Co., who supplied all the blooms gratis. These had

been grown for show purposes; but shows having been abandoned, it was thought well not to waste them, but turn them to a good account. Prize cards only were given in the competitive classes as mementoes of the show, and there were over one hundred and sixty entries. The whole of the produce was sold for the above Fund. During the day twenty young ladies undertook to sell button-holes in the streets. The number sold was over two thousand, realising the splendid sum of £15 15s. No doubt there are many who have a quantity of blooms to sell which might be used to bring about an equally good result.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Pungent Preserve of Pears.—An excellent addition to curry, or can be used as a sweet chutney. Ingredients: Four pounds of Pears, 3lb. of sugar, 2oz. of ground ginger, the juice and rind of a large Lemon, a suspicion of Cayenne pepper, and a little water. Method: Pare, core and quarter the Pears and boil with all the other ingredients till quite tender.—ANNE AMATEUR.

Butterflies.—Allow me to call attention to a new joy for these beautiful visitors to our gardens. I refer to Buddleia Veitchii. The long, closely set inflorescences attract a variety of butterflies. I noted Peacock, Tortoiseshell, Red Admiral, Large and Small White Cabbage and Brimstone actively engaged inserting their probosces into

The Verbascums.—It is pleasant to read Mr. E. H. Jenkins' appreciative notes on the Verbascums on page 435, issue August 29, and to see the good groups shown in the illustrations which accompany the article. I am an old admirer of the Mulleins, and having cultivated some of the hybrid Verbascums, derived from V. phœniceum, for a very long time, it is particularly agreeable to me to observe the great advance made in these flowers within the last few years. I have cultivated V. phœniceum for a great many years, but somewhere about twenty years ago, I think, I observed in the seed list of the late Mr. Baylor Hartland of Cork that seeds of V. phœniceum hybrids were offered. I procured a packet, and from these seeds had some beautiful varieties of the phœniceum type, but generally rather more vigorous. One of these was the same as Caledonia, and I still have that plant in my garden. There were whites, bronzes, purples and almost lilacs, but no pure yellows. I saw

beauty. There seems to be no limit to the variety we shall have among these flowers, and the most careful selection will be necessary if we are not to be flooded with too many new forms, a large proportion of which are too much alike.—S. ARNOTT.

Help the Trade.—It is somewhat strange that, despite the very real enjoyment and interest obtained by the pursuit of gardening, it is almost invariably in the garden that at any time of financial stress the first efforts are made at retrenchment of expenditure. It is an old grievance among gardeners that employers are wont to cut down expenses and reduce the wages bill in the garden when they do not dream of disturbing the stables or the household staff. None can gainsay that at this time of grave crisis it is but reasonable—if, indeed, not absolutely necessary—that one and all should exercise economy and guard against anything approaching extravagance; but there are, happily, many in this land of ours

whose means admit of their adhering more or less to their customary modes, even at such a time as this, and it is sincerely to be hoped that they will heed the appeals that have been made and help traders, including nurserymen, to carry on business as usual. No secret need be made of the fact that, generally speaking, the nurseryman's business is one that shows its owner little more than a decent living, so that a stagnation of trade leaves no option but to reduce the staff of workmen to the lowest possible limits. The workers, even at the best of times, receive no more wages than suffice to meet the most moderate requirements, and to be thrown out of work is to be immediately thrown into a state of privation and want. It is, therefore, a matter of real importance and urgency that all who are able shall continue to support the nursery trade and send without delay orders for trees, shrubs and plants, so that nurserymen may find the wherewithal to keep going and retain their workmen. Owners of large estates will doubtless find opportunity this autumn and winter to carry out schemes of planting ornamental and fruit trees, or of



GRASS OF PARNASSUS IN A STREAMSIDE GARDEN.

the tubular flowers with evident enjoyment, thus adding new beauty to a very showy shrub. To get the plants in perfection of flower they should be cut hard in the spring. Later on, the pink Sedum spectabile is very attractive to butterflies, growing only a foot high, with dense, flat flower-heads. One autumn our Michaelmas Daisies were swarming with the Painted Lady, which is ordinarily rare except on our Kentish coasts.—GEORGE BUNYARD.

The Grass of Parnassus (Parnassia palustris).—It is interesting to note that the Grass of Parnassus, which is still flowering in many bog gardens, is in reality a native of this country, and is found wild in moist heaths and bogs. It takes its popular name from Mount Parnassus, where presumably it also grows wild, and it was called Grass of Parnassus by Dioscorides. Unlike many choice British plants, it is amenable to cultivation in our gardens. It may be increased either by seed or division, and thrives in a moist, peaty soil.—C. Q.

some hybrids at Mr. T. Smith's Newry Nurseries later, and more recently, of course, the advent of the fine hybrid Miss Willmott opened up to us a new range of Verbascums. Messrs. Harkness and Sons of Bedale have done good work with these flowers, and some of their varieties, such as International and New Departure, are splendid Mulleins. I have also had an opportunity of seeing the magnificent new Warley Rose, exhibited in London this year, which is a flower of outstanding beauty and distinctness. Another Bedale firm, Messrs. George Gibson and Co., have also entered the field as raisers of new Mulleins, and I have had the pleasure of examining some thirty new varieties raised by them. Of the yellows, Golden Glory, with a crimped edge; the large light yellow Fernandes; Aquitania, large deep yellow; and Dr. Hutchison, almost cream, were among the finest. I also noted those named The Premier, mauve and very large; Terra-Cotta, the name indicating the colour; Mauve Queen, mauve; and a number of others of much

effecting alterations and improvements in their grounds that will bring into requisition both plants and labour. The middle-class amateur gardeners will, let us hope, realise that ever so small a sum that can be spared for a few plants will be a help towards pulling through this most trying time; for it is infinitely better to so spend money that it will help to keep trade on the move than to disburse indiscriminate charity. One other thing calls for mention, to wit, a large proportion of the tools used in gardens have of late years been of German manufacture. Propagating and pruning knives, shears, secateurs and a good many other gardening requisites have been imported; but it behoves every owner of a garden to insist that articles of British manufacture only shall be used in his garden. We owe it to our fellow-countrymen and to ourselves that the money we spend shall be for the benefit of home trade and British workmen, instead of going into the coffers of those who are striving by brutal force to crush and degrade us.—HEATHER BELL.

GARDEN FRITILLARIES.

"I T hath been called Fritillarie," Gerard tells us in his "Herball" of 1597, "of the table or boord upon which men plaie at chesse, which square checquers the flower doth very much resemble."

He was speaking of our Meadow Fritillary or Snake's-head, neither of which English names can have been very common in his day, for although Lyte more than twenty years earlier wrote that the *Flos Meleagris* was sometimes called *Fritillaria*, Gerard goes on to say: "In English we may call it Turkey-hen or Ginny-hen Floure and also Checquered Daffodill and Fritillarie according to the Latine."

As a fact, however, the Latin "*Fritillus*" was a dice-box, and not a chess-board as is sometimes stated, and if dice-boxes bore a mottled or check pattern, there would be every probability that they had suggested the name for the slender-stemmed plant with its solitary upturned flower-box. Clusius says the name was given by Capperon, a druggist of Orleans.

Fritillaria Meleagris.—Less than half the known species of *Fritillaria* are in cultivation, and of the thirty or so that appear in nursery lists very few are known and appreciated as they deserve. None of them, it is true, better deserves knowing than the beautiful wilding which still maintains its place in the moist river meadows near Oxford. There can be no need to describe what everybody has or can get at 4s. a hundred. It is a plant to use in battalions and to encourage to naturalise in grass or orchard. If the soil is very light and dry, I should plant in half shade. That will also tend to give longer and more slender stems as well as more lasting flowers. But in retentive soil at Colchester it does thoroughly well in full sun, and the little colonies of about half a dozen sorts that I planted several years ago are now thoroughly mixing themselves up by throwing seeds into one another's territories. Of course, with plants that seed so freely, there are a great number of named kinds about. Parkinson knew a dozen, but I do not know that many people need more than half that number. The pure white one, *alba*, is, of course, indispensable. *Empeior* is very distinct. It has such large, broadly expanded blooms that it seems more than a mere colour form, and if I wanted to add a darker and a paler form, I should choose *F. Orion* and *F. Cassandra*. There is a very curious Fritillary that goes under the name of *F. contorta*. The segments of the perianth are in part united and the flower tapers gradually from the base to the apex, forming a long, slender trumpet in place of the shouldered cylinder of the typical *P. Meleagris*. There are white and purple forms of it, but both are very uncommon. Nicholson in his "Dictionary of Gardening" says that the origin of the plant is unknown, but I have seen it stated that it has been found wild in company with the Snake's-head, and that it is probably only a sport. If so, it is the most distinct sport I know. These common Snake's-head Fritillaries

are well worth growing in pots to provide early flowers. They are very easily grown in any cool greenhouse or frame, and few things are more graceful and charming.

F. imperialis.—The second Fritillary to mention is, of course, the old Crown Imperial, about which there is a magnificence that really demands nothing less than first place, although its smell is hardly what we should describe as regal. Parkinson knew and loved this old plant, for it was introduced about 1590. "The Crowne Imperiale,"

Crown Imperials love rich living, and for the best results the bulbs should be lifted every three or four years and given more room. I have them established in full sun under a south wall, flowering regularly and freely, but in light soils it is important to see that they do not dry out when in active growth, and principally for this reason I think half shade or a north aspect is then the best place for them. They are admirable for massing in shrubberies and borders, and though their flowers are hardly suitable for use in room decorations, in a large hall a bold vase of Crown Imperials makes a handsome subject.

F. chitralensis.—In 1910 the Royal Horticultural Society gave an award of merit to a very interesting yellow Fritillary from Chitral, which, in spite of many obvious differences, the botanists insist on describing as a variety of *imperialis*. The bulbs are only about the size of a pigeon's egg, and the whole plant is much more slender than our Crown Imperials. The leaves, too, are scattered instead of whorled, and the flowers come out in February or March, well before those of the type, and without any unpleasant smell. We have not yet had it long enough to say much about its culture, but I have a good stock, and do not think it will prove difficult.

F. pallidiflora.—Having disposed of these two dominant species, it becomes somewhat more difficult to pick the best third. I should vote without hesitation for *pallidiflora*, but it is so seldom seen or praised that one might imagine there was something difficult about it. It has very large, pale creamy yellow bells, in a loose, open inflorescence, one or two bells on poor plants, but seven or eight on good bulbs, and well disposed above broad, distinctive grey foliage. When the flowers are fertilised they often suffuse with a brownish shade in a handsome way, and then the seed-pods erect themselves and become showy too, for they have large, winged ribs. It is a plant with character. I grow it in full sun in heavy soil, but I know others recommend half shade for it, which leads me to think that success very likely depends on the underground water supply. It flowers practically through the whole of April.

F. persica.—I hope I am not doing *persica* an injustice in placing it fourth, for it is a very old favourite, known to Gerard as long ago as 1596, whereas *pallidiflora* is a comparative newcomer, which we owe, I think, to Dr. Regel. When it thrives, *persica* is one of the most distinct and beautiful, and its cheapness is a sign that it does generally thrive. It is one that is quite good on light soils. The flower-stem rises 2 feet to 3 feet, and in the upper portion carries as many as fifty of the plum purple, metallic-looking, fragrant bells in April and May. The foliage, too, forms a handsome groundwork, from which the flower-spire springs; there is no weakening of the effect by running large bracts among the flowers, as in some of the species. R. W. WALLACE

(To be continued)



FRITILLARIA PERSICA, AN EASILY GROWN SPECIES AND A TIME-HONOURED FAVOURITE IN GARDENS.

he says, "for its stately beautifulness deserveth the first place in this our garden of delight, because it is so well knowne to most persons, being in a manner everywhere common." This, too, has many garden varieties. I like best the large yellow (*F. maxima lutea*), but the giant red is not inferior to it, and the kinds with gold-striped and silver-striped leaves are among the most handsome of variegated plants. *F. inodora* is a scentless form from Bokhara with brownish red flowers. This is fairly common, but there is a purple form, also scentless, introduced in 1885, which I very much wish I could get.

DAFFODILS FOR POTS.

THERE must be few people nowadays who have not pots of Daffodils or Narcissi of some kind. Why not try to extend a little this season? No plants are more easy to manage.

By a judicious selection of varieties and by the thoughtful use of a cold frame as a feeder to the glass house a long succession of bloom may be maintained. From early December, when we may have Paper-white Polyanthus Narcissus, onward up to the time of the outdoor flowers coming in, there should be no difficulty in having a few potfuls of bloom. The two best varieties to use, if flowers are wanted

in the first week of the new year, are Henry Irving and obvallaris. The next in order are Golden Spur and princeps. After January 21 the number is largely augmented, but (and the "but" is very important) an early potting is absolutely necessary and as early ripened bulbs as can be procured. It might be well worth while for traders to develop this idea and make a speciality of early ripened Daffodils to be delivered at the same time as Roman Hyacinths in August. I had bulbs from Guernsey, Sweden and other places in my greenhouse last winter. In every case the Guernsey-ripened ones flowered first and the Swedish last, exactly as I anticipated. My particular purpose in these notes, however, is to mention some of the new kinds which have been found particularly suitable for pot culture. I have come to the conclusion that I cannot repeat myself too often in the advice I have to give, for these take more getting known than anybody would imagine. I am very glad to see that firms like Messrs. Barr and Sons, Messrs. Cartwright and Goodwin, Mr. C. Bourne, Messrs. Sutton and Sons, and doubtless others make selections of particularly suitable varieties. It is all in the right direction, but when a hundred kinds are included in a list a considerable part of its utility is lost. It would be better in tabloid form. I want, first of all, to mention three or four out-of-the-way flowers which are never or hardly ever met with in the usual retail lists, but which are, nevertheless, real "front rankers." Stromboli, an elegantly formed yellow trumpet, and Coronet, a most graceful bicolor trumpet, are ideal plants for early pot work. Golden Spider is another good thing. Its time of flowering is after Golden Spur. It may be described as a yellow form of princeps. I can grow it myself at Whitewell, and although my ground is late, I have had excellent blooms from home-grown bulbs quite early, which is a very useful thing. Cervantes, which, I believe, is an Italian form of princeps, is not so much grown as it should be in our greenhouses. It is deeper in colour, and its trumpet has a wider and more frilled top than that of the type, while its segments are somewhat shorter and broader. Beethoven is the last of my special "specials." It figures in the "Daffodil Year Book" for 1914. I have the highest opinion of it for pot work, and its distinct shape and colouring make

it a marked plant wherever it is grown. No other variety that I can think of has such a jagged edge to its trumpet. It is like a huge cross-cut saw compared to the fine-toothed one of the kitchen.

I pass now to the ordinary kinds that figure in nearly every list, but which cannot be too well known or too much used for the purpose for which they are selected. Prices, I fear, will put "top weight" on some, but one well-grown bulb in a 4-inch or 5-inch pot is capable of affording very great pleasure, and if it is well looked after when it has done blooming and then carefully dried off, it may be planted out in the open in the autumn but little the worse for its adventure. One or two florins or half-crowns laid out in this



TULIPA RETROFLEXA. COLOUR, SOFT YELLOW.

way by those who can afford to give themselves a little treat will, when blooming-time comes round, be considered money well spent. King Alfred must head the list, if only because I think trumpets, giant Leedsis and giant incomparabilis are the best of all types for pots, and of the trumpets King Alfred is the undoubted king. Then we have Weardale Perfection and Duke of Bedford, while for earliness and freedom of flowering Fairy is difficult to beat. Blackwell, Firebrand and Lucifer are fine for providing colour, far in advance of any of the old originals like Cynosure and even Beauty. Fairy Queen among the Leedsis is a little gem of the first water. It comes early and easily. Then, of course, Lady Margaret Boscawen as a giant incomparabilis

and Seagull as a pale Barri are both very fine. Lastly, Admiration and either Alsace or Aspasia (according to whether an earlier or a later one is wanted) among the Poetaz make up a select dozen, every one of which is in its way first-rate.

JOSEPH JACOB.

TULIPA RETROFLEXA.

THE curiously recurved flowers of Tulipa retroflexa give to this plant a peculiar charm and make it quite distinct from all other garden Tulips. The origin of T. retroflexa appears a little doubtful, although it is generally believed to be a garden hybrid between the Turkish Tulip, T. acuminata, and T. gesneriana, the latter parent, according to Baker, being the original stock of most of the late-flowering Tulips. Whatever the origin of T. retroflexa may be, it is unquestionably a beautiful subject worthy of extended planting in the open, and of great value for cut flowers and table decoration in the spring. It is quite easily grown, and produces its soft yellow flowers in early May.

DARWIN TULIPS.

FASHION, the "universal" captain on the bridge, has kept the engines of the good ship Darwin going "full speed ahead" for a very long time. Messrs.

Krelage and Son, the makers, thought she might perhaps do eighteen to twenty knots, but she has left that far behind, fairly astonishing them with her speed, and is now doing a comfortable thirty, with every likelihood of her reaching an ultimate forty.

Marvellous have been the strides which the Darwins have made in popular favour within the last two or three years. Those who visited the Royal Horticultural Society's Tulip nomenclature trials at Wisley last spring will have noticed the large extent of ground that they covered. Speaking from memory, I should say there must have been almost as many Darwins as all the others put together. As far as I am able to judge, this is but a true reflection of the popular taste. What has brought them so

much into favour? Undoubtedly, first of all, their extraordinary effectiveness in gardens, both in small clumps and in masses. Half-a-dozen Farncombe Sanders look fine in a border. Two hundred are gorgeous in one solid block in a bed. Secondly, their value for growing under glass is being more appreciated every year. The appearance of Sweet Lavender at one of the January "Tuesdays" of the Royal Horticultural Society was a veritable eye-opener to many. I shall not forget in a hurry my surprise when I opened a parcel post box that reached me on January 6 bearing the postmark of Leiden and the name on the label of de Graaff Brothers, and found therein six beautiful blooms of Sweet Lavender. I have learnt since that these blooms were a sort of first-fruits of a

very extensive trial that they made last winter to test the suitability or otherwise of various Darwin varieties for forcing. I have more than once done the same myself, only I have always been content to try for a first week in March flowering, whereas they tried to bring them in very much earlier. I should imagine, however, that these will be more useful for using as cut flowers than in pots, on account of the length of their stems. Let me deal with their culture under glass first. If the object is to have very early flowers in February, the bulbs should be potted in September and then placed under sand or in a darkened cold frame, as is usually done. On January 1 they should be given a temperature of 50°, and in two or three weeks from then, according to the way they are seen to respond to the slight heat, they should be placed in another house where they will have 70° and where they will flower. If the idea is to have pot plants or flowers for cutting in March, the same early routine must be followed; that is, the bulbs must be rooted and then placed in a cold frame which can be protected from frost, where they must remain, having the whole time as much air as the state of the weather will allow, until the end of January, when they must be removed to a house with a day temperature of 50° to 55°, and which does not fall below 40° at night. Here they will bloom from about March 10 onwards, according to their respective earliness or lateness. Treated in this way I find I always get good strong stems which are very little "drawn," so that the potful is quite usable, as it is in suitable positions on the floor. By placing them low down, two advantages are gained: First, the inevitable tallness is not aggressive; and, secondly, the beautiful bases and interior of the blooms can be enjoyed, which is impossible if the flowers are above our heads. Mr. Jan de Graaff very kindly sent me a copy of the results of his firm's trials. The following are the ten best of the earliest bloomers, every one of them being in flower before February 14: Erguste, Fanny, L'Ingénue, La Tristesse, Pride of Haarlem, Rev. H. Ewbank, Sierrad van Flora, Sweet Lavender (late William Copeland), William Pitt and Zanzibar. Those which I have found good for March flowering include Zulu, Painted Lady, Suzon, Professor Rauwenhoff, Erguste, Pride of Haarlem, King Harold, William Pitt, Edmée, The Bishop, Loveliness and Ouida.

Passing now to the question of outside planting, there is not a great deal to be said. I would never plant before November. The old-fashioned day for the operation, although it originally concerned only the striped florists' varieties, is equally suitable for our modern Darwin and Cottage forms. Lord Mayor's Day should be mentally noted as the ideal time for Tulip planting. The only ones that need be put in earlier are the small offsets, which should

never be out of the ground after the end of September.

I have read somewhere that the original stock of Darwins bought by the present Mr. E. H. Krelage's father contained upwards of two thousand kinds. I can well believe it, for the number that is catalogued at the present time is prodigious. I have before me as I write the third list of Darwin Tulips issued by the introducers in 1891. It contains 300 varieties, which vary in price from five pounds for La Tulipe Noire to sixpence for some that are now quite unknown, with the exception of Pomona. The same firm's list for 1914 contains 152, the most expensive of which are Orange Perfection and Aphrodite, 5s. each; and the cheapest, Fanny, Fra Angelico, Gudon, La Candeur, Millet, Paris, Pomona, Pride of Haarlem, The Sultan and van Poortvliet, to name but a

dear, being, in fact, my pick of a "real good" twelve.

The cheap list: Dream, Margaret, Fra Angelico, Loveliness, Pride of Haarlem, General Köhler, Clara Butt, Baronne de la Tonnaye, Millet, Nauticus, La Candeur and Edouard André. A real good dozen: Euterpe, Pride of Haarlem, The Bishop, Morales, City of Haarlem, Valentin, Bleu Aimable, Clara Butt, Louise de la Vallière, Scarlet Perfection, L'Ingénue and Sir Trevor Lawrence. I have written down the above, the choosing of which must have added more grey hairs to my already plentiful stock, but I do not like leaving out Erguste, Mr. Farncombe Sanders, Frans Hals, Suzon, Petrus Hondius, William Goldring, La Fiancée, Faust, Anton Mauve, Prince of the Netherlands, Zulu and Millet, and so I could go on for ever until almost



DARWIN TULIPS IN A FORMAL GARDEN.

selection, all priced at one penny. It is truly a staggering list to confront the would-be purchaser of a humble dozen; no wonder he falls back defeated. Whatever is he to do? I appreciate his dilemma. My experience of them is fairly wide, and when I come to pick out the best dozen I am utterly nonplussed. It cannot be done. Mr. Jan Roes, the Tulip O'Brian of Holland, the chairman of the Dutch Bulb Growers' Tulip committee, could not do it. Mr. Walter Ware, who has handled almost every variety "that ever was," could not do it. It would be a bigger task than putting together without a key one of those thousand-piece puzzles which were so much the rage two or three years ago. After saying so much I am not going to attempt it. Instead I am going to give two selections containing twelve varieties each, both of which will be representative and varied in colour, one being confined to the cheapest kinds and the other including both cheap and

the whole of the afore-mentioned two thousand were included, and I would end by making confusion doubly confounded.

TROJAN.

PLANTING BULBS IN GRASS.

WHILE it is generally agreed that bulbs look extremely beautiful when flowering in the grass, at the same time the bulbs require to be planted with a little forethought. A very common error is to mix varieties at the time of planting, and as the flowering seasons of different varieties seldom coincide, the general effect in springtime is much impaired. This is particularly the case with purple, white, and yellow Crocuses, which give far better results when the colours are kept to themselves. The illustrations of white Crocuses on grassy mounds and Narcissus Barrii conspicuous naturalised in the grass (pages 455 and 458) give one an excellent idea of the bold effect to strive for when planting bulbs in grass.

BULB NOTES, 1914.

AMONG those who must owe a debt of gratitude to the British Navy at the present time may safely be included the members of the Dutch Bulb Growers' Association. Thanks to it the German ships of war have been so tightly bottled up in the Kiel Canal and the Baltic that the greater part, if not the whole, of the usual shipments from Holland are being sent across the North Sea, and by the time these words are in print they will have been landed on our shores. This means, above everything else, Hyacinths. Ever since the days of George Voorhelm, in the middle of the eighteenth century, the Hyacinth has been the flower of Holland. Something in the soil or its treatment, or both, enables the Dutch to produce the very best of bulbs, and except for a comparatively few home-grown ones, they supply the world. Doubles and singles have fought for precedence in the past; now a new type has come to the front. It is the day of the

Miniature Hyacinths. My ideal flower of the group is Orange Boven. It is distinguished by its loose spike and its small, neat bells. It has a good deal of the look of a Roman Hyacinth. In colour it is a pink buff. No other kind quite comes up to it in charm and grace, but the following come near it: Solfaterre (orange crimson), Grand Maître (medium blue of a very pretty shade), William III. (dark blue), General de Wet (pale pink), Winter Cheer (red) and Queen Wilhelmina (rosy pink, with curious little hooks at the ends of the petals). These should be always planted in small pans or low pots. I know I am always saying this about certain plants. If I seem to repeat myself too often, it is because I feel sure that if people only realised how much is gained in the *tout ensemble* of plants and pot, they would be universally used.

Ordinary Hyacinths.—One or two varieties struck me very much this year: Garibaldi (an early rich crimson), Queen Maria Sophia (early crimson with pink edge), Count Andrassy (wide blue petals with edges of mauve and very blue backs, loose spike, a clear-looking flower), Tortula (a lovely blue, Schotel improved), Ornament Rose (waxy-looking pale pink bells) and Perle Brilliant (short, fat spike, bells a fascinating shade of pale bluish mauve with very blue backs).

Early Tulips.—White Beauty, a sport from the well-known Pink Beauty, is singularly well named. The white is quite pure and the habit of the plant so good. De Wet, a sport from Prince of Austria, is an orange with a network of tiny red veins running all over the petals. With

age these become a good deal more pronounced. Distinction is two shades of crimson, the edges of the petals being brighter than the middle part: President Cleveland, long white flower with wide, pale rose edges to the petals; Max Havelaar, a paler and more orange Prince of Austria.

Tulip Species.—In this rock garden era I am sure the little branching *Tulipa dasystemon* is not sufficiently known. It has a small white flower with a large yellow base. It wants a sunny position, as it is one of those which only open wide in sunlight. Given a light soil, it will be found to increase and produce a large number of seeds.

BRITISH WOOD HYACINTHS (*SCILLA NUTANS*) IN A COPPICE.

Coloured Freesias.—Whenever the yellow and pinkish kinds have been staged I have frequently asked attendants about their popularity compared with the old pure white forms, and the invariable answer has been "The public do not appreciate them." One reason, perhaps, is that the colours are not clear and that the blooms have such a half-opened appearance in many of the varieties. These defects will doubtless be remedied in time. Meanwhile, of those which have come under my notice the prettiest are Contrast, which is the fac-simile of an orange tip butterfly in Freesias; Le Phare, well named, small individual flowers, but brilliant in a mass; Abundance, many flowered, blooms of a good open shape,

pink in their youth, deep rose in old age. Suttons have a good deep yellow, for they most kindly gave me some two or three years ago, but which it is I cannot make out from their list, as they only refer to colour in their descriptions, and colour is no more important than style when appraising the merits of a Freesia. I missed a variety called Excelsior, which obtained an award of merit on February 24 of the present year. Size and earliness are its notable points from the accounts in the papers. There is very little doubt that in a few years' time these easily managed bulbs will occupy a more important place among the early spring bulbs of our greenhouses than they do to-day.

Scilla campanulata.—These are the wild Wood Hyacinths of Spain, and must not be confounded with the early little deep blue flowers that are generally spoken of as Scillas. They are very similar to British Wood Hyacinths (*Scilla nutans*), but have larger bells, which are arranged symmetrically all round the spike, and not so much like a pastoral staff or shepherd's crook as in our own. They come into flower about the end of May, and might be introduced into beds and borders much more often than they are. Of course, they do splendidly in coppices or thin woods, and slowly brought on in pots they come in nicely as a change from Daffodils and Tulips in early April. Their garden nomenclature seems a trifle uncertain. There is a good pure white, usually called alba or alba maxima; another, Excelsior, a good deep blue; and a third, Rose Queen, a pretty mauve pink or pale rose. Blue Queen is a paler shade of blue, and Rosalind a deeper rose.

Scilla italica.—This flowers a long time after all the Scillas. I think it was July before it flowered with me this year. It resembles *Hyacinthus amethystinus* in its general bearing, and I have no doubt it would make an interesting plant for the rockery. The typical flower is a pale blue, but there is also a white variety. This *Scilla* and also *H. amethystinus* are so cheap

that they might both be given a trial for half-a-crown.

Crocus Species.—Everyone who has a warm, sunny, sheltered corner or two in their gardens should go in for a hundred or two of these heralds of spring. The day which tempts the honey bees from their hives is also the one when these are usually seen at their best. Wide open, full of buzzing, foretastes of warmer days, who would willingly be without some of these pretty, simple little blooms to give patches of colour, life and joy in the chilly time betwixt and between the rigours of winter and the balmy days of spring! *C. Imperati*, *C. Sieberi*, *C. tommasinianus* and *C. biflorus* are their names.

TRAVELLER.

COLOURED PLATE.

PLATE 1501.

THREE GOOD DAFFODILS.

I DID not select the title for the coloured plate. The Editor did. He is probably a prophet, so it is all right, but Olympia and Florence Pearson are one thing and Agatha is another. Let me illustrate my meaning by a simile suitable to the times. Roberts and Kitchener are one thing, Jellicoe is another. You have the tried and the comparatively untried placed together, that is all. The untried may be every bit as good as the tried, but the spurs have to be won. If anything will ever knock out Emperor, Olympia will be the flower to do it. If anything within any reasonable time will do the same to "Madame," Florence Pearson will be the culprit. Can I say more? I cannot say less, because that is my candid "foolish opinion," as my old gardener used so often to say to me. Agatha I remember very well. It was one of the adornments of my good friend Christopher Bourne's semi-circles when he had a corner position at the end of the hall (Royal Horticultural Society's Hall) one Tuesday last April. It is an exceedingly pretty flower, and from such an inspection as can be given in the hurry and bustle of a show, it substantiated all that is claimed for it, "pure creamy white throughout, perianth segments slightly pointed and twisted like King Alfred, . . . beautifully proportioned trumpet, frilled and recurved at the brim. The flower opens a week before Mme. de Graaff, and opens white. Tall stem; vigorous plant. Indispensable to exhibitors who want a good white trumpet at a moderate price." Six shillings each, three bulbs for fifteen shillings. It is the very thing I want, Mr. Editor. Thank you so much for reminding me about it. I must try to secure fifteen "hobs" worth.

CROCUS VERSICOLOR.

ONE of the prettiest of the spring-flowering Croci is *C. versicolor*, hailing from Southern France and Italy. With me it comes into flower during February. The flowers (see illustration on page 457) are large and peculiarly cup-shaped, and do not reflex like so many other species when the sun strikes them. In the interior of the flora' cups gleam the golden orange stigma and yellow stamens, forming a striking contrast to the shimmering, satin-like texture of the petals, which are white in colour, veined and feathered with rich violet purple. I plant outdoors in September fairly deeply, say, 4 inches to 5 inches, as the bulbs appear to thrive just as well, and by this means are protected to a considerable extent from damage when planting other subjects in their neighbourhood. REGINALD A. MALBY.

THE CULTIVATION OF LACHENALIAS.

IN the Lachenalia we have an ideal plant which may be grown either in pots or baskets for home or conservatory decoration. While other bulbous plants, such as the Hyacinth, Narcissus, Tulip and Freesia, require a warm, genial atmosphere to bring them to perfection, the Lachenalia is not so fastidious, and its cultivation quite simple by comparison, with the additional merit that instead of deteriorating each year, the bulbs improve in quality. There are several varieties, all of them beautiful, in colours ranging from green and yellow tipped with red to deep yellow.

(Necessary for when in full growth much water is required), and after this has been attended to, three parts fill the pot with the compost, making it fairly firm; then place five or six bulbs around the pot and fill to within half an inch of the rim of the pot with soil. The pots should then be placed in a frame and well watered, after which the lights may be drawn on and covered with light material to prevent the pots from becoming dry so quickly as to necessitate frequent watering. If this is done, only an occasional watering will be necessary until growth has begun, after which they should never be allowed to become very dry. In this position the plants may remain growing steadily, though slowly, until October, when they are ready for putting on a greenhouse shelf near to the glass. I put mine within 6 inches



CROCUSES NATURALISED ON GRASSY MOUNDS.

Of the latter shades I consider *L. Nelsonii* to be the best, when the true variety is grown; but, unfortunately, there are spurious stocks in commerce. My first acquaintance with this variety was at Belvoir Castle, in the late William Ingram's time, by whom it was very highly prized. With me it was "love at first sight," and I then determined that as soon as I was in a position to grow them personally, they should be my constant friends—this variety in particular.

Experience has taught me that August is the best month for starting the bulbs, and the soil should be prepared a week or so before it is wanted. This ought to consist of fairly light loam three parts, decayed leaf-mould or old Mushroom-bed manure one part, with a sprinkling of small charcoal and silver sand to keep the compost open. The most suitable pot is a 4½-inch or 5-inch, for if larger sizes are used they look disproportionate to the size of the plant. Good drainage is

or so, and this keeps them very sturdy and healthy, and there they remain in a temperature rarely above 50°, and often below 40°, until they are coming into flower. In frosty weather the thermometer may even go down to freezing point and not harm them, and it is certainly better to err on this side than to give a lot of heat.

When the flowers begin to expand, it is better to place the pots on a stage further from the glass, as this treatment will help them to last longer, for the sun's rays are very warm by February and March. Although some recommend liquid manure-water, I have not used it at any time during the last few years, apparently to their advantage. Plenty of water must be given during the flowering period and until the foliage begins to turn yellow, when only occasional waterings will be necessary for the next two weeks. The pots must now be put on a shelf in the full sunshine, and thus allow the

bulbs to be completely "baked." Thorough ripening of the bulbs is one of the secrets of successful culture, and they may be left in that position until August, when they should be shaken out of the soil and graded into two sizes—the large, old bulbs to be repotted as previously advised, and the younger and smaller bulbs may be placed twice as thickly in the pots as the larger ones and be given the same treatment throughout. Every one of these small bulbs will flower, but, of course, the spikes will be smaller.

West Moors, Dorset.

F. LANSDELL.

HIPPEASTRUMS AND THEIR CULTIVATION.

AMONG the various classes of plants that have been greatly improved within recent years

richer colour, and with the green in the centre nearly eliminated. In speaking of this species in the past tense, one is justified by the doubt whether the typical species is still in cultivation.

Apart from the superior form and size, a noted feature of the present-day race of Hippeastrums is the increased number of flowers that are borne on a scape, but more particularly the wide range of colour that is to be found among them. The white variety is now an accomplished fact, and there are also pinks of various shades, carmine, ruby, scarlet, crimson, and almost purple, as well as salmon and different allied hues. Besides these, striped and flaked flowers are very numerous, but according to present-day ideas these are less popular than they were at one time.

Propagation.—Hippeastrums can be increased to a greater or lesser amount by means of offsets; but the general mode of propagation is by seeds, which in a general way ripen freely. As with

plants, it is, in my opinion at least, much better to sow them when they are ripe. It matters little whether the seeds are sown in pans or pots, but in this last case a liberal amount of drainage is necessary. A compost made up of equal parts of loam and leaf-mould, with a liberal sprinkling of silver sand, is very suitable in which to sow the seeds. Care must be taken not to sow them too thickly, and they should be covered with about one-third of an inch of finely sifted soil. Then, if placed in a structure where a temperature of 65° to 70° is maintained, they will soon germinate and the young plants grow away freely.

Treatment of Seedlings.—When sufficiently advanced, they may be potted singly into small pots in the same kind of compost as that in which the seeds were sown. They should be ready for this potting off by October, when, if a gentle bottom-heat is available, they may be plunged therein, the top temperature during the winter being a minimum one of 60° to 65°, rising, of course, during the daytime. A good light position in a small structure suits these Hippeastrums best. By the end of February they will be ready to shift into 4-inch pots, and by the latter part of May another change may be desirable. Pots 5 inches in diameter are very suitable for this. At the end of this season they will not need to be dried off as established plants are, but, at the same time, less water will be needed than when they are growing freely. In this way an occasional seedling will flower in eighteen months or a little more from the sowing of the seeds, but the character of the flower cannot be decided upon till a year later.

Repotting Established Plants.

At one time it was considered necessary to repot Hippeastrums every year, but this is now seldom done. Some prefer to divide the collection into two batches—thus each plant is repotted in alternate years; while others allow them to go longer than that. In any case, those that have not been repotted must be well fed during the growing season. Repotting is generally, though not universally, carried out early in the year, just as the plants are about to start

into growth. At that time a temperature of 60° to 70°, increasing as the season advances, will be very suitable for them. After the flowers are over is a very important period with the Hippeastrums, as they need to be kept in a growing temperature in order to ensure well-developed bulbs. If the pots are well furnished with roots, liquid manure will be helpful. When growth is completed, the plants may be removed to a sunny frame, husbanding the sun-heat by shutting up the lights early. With this treatment the bulbs will become firm and gradually ripen under the influence of the summer sun. As the leaves turn yellow, less water will be needed, until, when the bulbs are totally dormant, it may be discontinued altogether. During the winter, when dry, the temperature of the structure in which they are kept must not fall below 50° to 55°. H. P.



THE WILD WOOD HYACINTH OF SPAIN (SCILLA CAMPANULATA).

must be included the Hippeastrums, which are, however, far more generally grown under the name of Amaryllis. The garden forms of the present day have resulted from the crossing and intercrossing of several distinct species, but some have played a much larger part than others. For instance, *H. aulicum*, though the flowers are large and showy and the plant of easy culture, has the segments much too pointed to commend it to the hybridist, who is aiming at the production of round, well-filled-in flowers.

A species that has played a very prominent part in the varieties of to-day is *H. Leopoldii*, which, discovered by Richard Pearce of tuberous Begonia fame, first flowered in the early seventies. The flowers of this were crimson, with a large green centre; but continued selection has resulted in a much superior flower, larger, rounder, of a

all other classes of plants, some individuals are better adapted for seed-bearing than others. In crossing flowers for the production of seeds, the greatest measure of success is attained when it is limited to members of the same section, as then the production of improved forms is quite within the bounds of possibility; whereas when widely diverse forms are crossed with each other, a mixed and not very desirable progeny is usually the result, though occasionally distinct shades of colour crop up in this way.

Seed-Sowing.—From flowers that are fertilised in the spring, the seeds may be expected to ripen in July, or very soon afterwards. This is shown by the pods splitting open and exposing the black winged seeds. Some cultivators prefer to keep the seeds until the spring; but, given a suitable structure for the accommodation of the young

BULBS IN THE ROCK GARDEN.

IN choosing bulbs for the rock garden it is important to avoid any species or varieties which would appear incongruous among rocks and alpine plants. No law can be laid down on this point. It is purely a matter of taste. But to illustrate what I mean: The natural species of *Crocus* all look well in the rock garden, while the rotund Dutch varieties, which sparrows love to kick to pieces in the borders, are better away from alpine plants. Also, not only should one preserve a sense of proportion or scale between the size of one's bulbous plants and the size of one's rock garden, but care must be taken in putting the right bulbs under the right rock plants. Such things as Daffodils and Bluebells, though quite in place in the coarser outskirts of a large rock garden, become giants on a small one. The thoughtless planting of a lusty *Narcissus* under some choice tufted silver *Saxifrage* would probably mean that the latter would be butted clean out of the ground in spring.

Of *Crocuses* there are many beautiful species for the rock garden. *C. speciosus* is one of the easiest to grow. It flowers in September, a splendid butcher blue. Among the best spring-flowering kinds are *C. Imperati*, inner segments pale lilac, the outer ones buff, with deep purple featherings; *C. susianus*, golden orange, feathered with chocolate; and *C. tomasinianus*, lilac.

Among the many species of *Tulipa*, three very satisfactory ones for the rock garden are *T. persica*, *T. clusiana* and *T. kaufmanniana*. *T. persica* is a quaint dwarf, with usually two yellow flowers hanging from a 4-inch to 5-inch stem. It may be planted among such dwarf things as the smaller *Campanulas*. *T. kaufmanniana* is also short in the stem, and should be planted accordingly; but its flowers are large, like great Water Lilies, and palest yellow, each segment with a stripe of soft pink. A group of these, fully expanded in the sun, is a glorious sight. *T. clusiana* is tall and graceful, the flowers white, very long and pointed, and each segment with a stripe of pink.

Of the *Irises* there are many bulbous species, and some of the dwarfer ones are excellent for the rock garden. *I. reticulata*, 5 inches to 6 inches high in earliest spring, bears flowers of rich violet colour and rich violet scent. Its variety *Krelagei* bears flowers of claret violet. *I. Histrio* and *I. histrioides*, of a more lavender blue, have brilliant and very early flowers, and both are a little uncertain unless the soil happens to suit them. The same may be said of *I. Danfordiae*, which is dwarfer than any, and has sturdy, broad flowers of bright,

clear yellow. The curious *Snake's-head*, *I. tuberosa*, a foot high, with flowers of chocolate and apple green, is worth naturalising in rather light soil in full sun on any fair-sized rock garden.

The finest *Colchicum* is the autumn-flowering *C. speciosum*, with immense blossoms of lilac pink in September. This is not a plant for a small rock garden, especially on account of its coarse summer foliage. There is a superb snow white variety of this species. Among *Snowdrops*, *Leucojum Elwesii* is, perhaps, the finest, but I like the common old *L. nivalis* and its double form the best. The smallest rock garden should have a clump or two of *Snowdrops*, and clumps

rosy flowers in September. There is a rarer, pure white variety of this. Both are easy to establish, and where happy and undisturbed, self-sown seedlings will appear. *C. europæum* flowers also in late summer, and its dainty pink blossoms are deliciously fragrant. For early spring flowering there are *Cyclamen Coum* and *C. Coum album*, pink and white; *C. ibericum*, deeper red; and *C. repandum*, pink, with long, slightly twisted petals.

The miniature *Narcissi* are so very dainty and charming that they may be planted in the smallest rock garden and among the choicest alpine. The best are the varieties of *Bulbocodium*, *N. cyclamineus*, *N. minimus*, like a minute *Lent*

Lily, 1 inch or 2 inches high; *N. moschatus* and *N. triandrus albus*. It would be interesting to experiment with some of these in the moraine. Of larger *Narcissi*, my favourite for the bolder parts of a large rock garden is *N. Johnstonii* Queen of Spain. Personally, I dislike the highly bred modern race of *Narcissi* in the rock garden. They are beautiful in themselves, as hybrids so often are, but the rock garden does not seem the place for them.

The *Snake's-heads* or *Fritillaries*, *Fritillaria Meleagris*, are almost too well known to need special description. On any but quite small rock gardens they are well worth planting. They may be planted in scattered drifts, either mixed, white and pinkish, or separately. There are a good many other attractive species of *Fritillaria*, of which the following should be tried: *F. aurea*, rich golden bells mottled with brown inside, height 6 inches; *F. citrina*, a curious green and citron yellow flower, a trifle taller than *aurea*; and *F. recurva*, one of the most beautiful and brilliant, with flowers of rich orange scarlet, the petals recurved like a *Turk's-cap Lily*.

Some time ago I tried *Anomatheca cruenta* on the rock garden. It did very well, seeded itself about and stood the winter without

protection. It is a brilliant and dainty thing, rather in the way of a tiny *Freesia*, 4 inches or 5 inches high, the flowers smaller than those of a *Freesia*, and more starry open, bright cherry red, with a crimson red bar across each petal. But to me it is not quite the plant for the rock garden. It is a Cape bulb, and for some indefinable reason it looks out of place among alpine plants. But it is such a jolly little thing and so little known generally that I could not resist mentioning it in place of a hundred good bulbs that I have left unnamed, and which really are quite suitable for planting on the rock garden.

Stevenage.

CLARENCE ELLIOTT



CROCUS VERSICOLOR IN A ROCK GARDEN NEAR LONDON.
(See page 455.)

they should be, not scattered drifts. They look prettiest, perhaps, in angles and nooks between rocks at the path-sides, springing through low, close carpets of green.

About *Anemones* I hardly dare begin; there are so many of them, and all are so beautiful. A *fulgens* one must have for its dazzling scarlet, black-eyed flowers; also *A. nemorosa robinsoniana*, the pale lavender Wood Anemone. *A. blanda* is not unlike it, and varies from white, through lilacs and lavenders, to the superb deep violet variety *Ingramii*.

The tiny hardy *Cyclamen* should be grown in shady corners. *Cyclamen neapolitanum* has handsomely marbled, Ivy-shaped leaves and charming

NOTES ON AURICULAS.

IN September, work among Auriculas consists chiefly in giving all the air possible, careful watering, and keeping the plants clean. The lights can still be removed, except in wet weather, the object being to make the plants hard—to use a gardening term—and to secure that sturdy growth which Auricula-growers delight to see at this period of the year. If the plants are weak and drawn, it will be a difficult matter to bring them safely through the damp weather which we usually experience about December. I trust readers will pardon me for again referring to watering, but it is important that water should only be given when necessary. The plants ought to be looked over every second day for this purpose, and water must not be allowed to accumulate in the hearts of the plants, this remark applying

an excellent account of themselves in the open ground.

Seedlings.—All the seed required was sown as soon as it was ripe, and that sown early in July has already germinated and formed two tiny leaves. When large enough they will be pricked off, about an inch apart, in pans or boxes of rather light soil. Here they will remain for the winter months, arranged a foot or so from the glass of a cold frame. All decayed leaves should be picked off, and the soil may be stirred with a pointed stick occasionally to prevent it becoming sour and green. A sweet and open compost is very essential in Auricula culture. Some of the seeds will probably lie dormant until the spring, so it is not advisable to dispense with the seed-pans for some months.

Keep the Plants Clean.—Cleanliness is most important, and green fly must be destroyed by fumigation directly it is seen. I always try at

ROSE-GROWING IN TOWN GARDENS.

IN THE GARDEN for August 8 I am taken gently to task by "White Lady" for an opinion previously expressed in regard to the relative merits of fragrance and shape in Roses. The subject is of necessity one that admits of argument, since it is entirely a question of individual appreciation. My wish was not to depreciate the value of scent, which appeals to me strongly, but rather to refute the allegations of those whose cry is always that this desirable attribute is becoming lost, which is far from being the case. The connection between smell and memory is a fortuitous one, varying in extent and effect in each individual, and one may doubt whether the exercise of other senses do not give equal pleasure in their relation to memory. From an artistic or æsthetic point of view one must place shape first. To me it brings the greater pleasure, but I have no quarrel with those who think otherwise so long as their Roses are a source of joy to them.

Those who have not yet cut away the old growths of Wichuraiana and Multiflora Roses should lose no time in completing this task. The new growths can now be tied out so that each is obtaining as much air and sunshine as possible. Ramblers that are at all prone to mildew ought to be carefully looked over, as the crowded growths of late summer will have rendered them more liable to become affected. In addition to spraying, where it is possible the tips should be bent over and dipped in a pail of the wash. If the fungus is now allowed to spread, it will attack the soft stems, and the plants will lose much of their vigour, besides assisting to ripen innumerable quantities of mildew spores in their hard winter cases, which are practically indestructible. A careful look-out ought to be kept for black spot, and if it appears, one should be prepared to take the most drastic measures to combat it. In a small and often crowded town garden one cannot afford to risk the spread of this

disease, and I would advocate the immediate removal and burning of the plants affected; but if this is not desired, every leaf which shows signs of the disease should be picked off and burned, and the trees all round sprayed thoroughly with a reliable fungicide at the full strength recommended. Subsequently the same treatment may be given at least once a week, picking off all diseased leaves as frequently as possible in the meantime. On no account must these be allowed to lie in a rubbish heap, even in a remote corner of the garden. Burning is the only way to make sure that the spores will not spread, and the sooner this is done the less will be the risk.

All cut parts of the stems of Roses, especially standard trees, ought to be carefully looked at, and where the pith has been bored, the sawfly grub should be extracted before it has gone deep enough to damage the plant irretrievably.

P. L. GODDARD.



NARCISSUS BARRII CONSPICUUS NATURALISED IN GRASS.

more especially to the show varieties. Every attention should be given to these few simple details, and it will then be found that the Auricula is not so exacting in regard to treatment as some would have us believe. It is an amateur's plant, and should be grown by all, either in a cold frame or in the flower garden. I would strongly advise readers to try a few in the open border or rock garden.

In the Open Ground.—Some varieties are very prolific in regard to offsets, especially such kinds as Argus, Duke of York and Thetis, which are worthy of being grown in quantity. A good plan is to plant them in batches in the flower garden or any position where a neighbouring tree will supply a little shade during the hot part of the day. Some of the yellow forms are excellent for this purpose, particularly the beautiful A. Queen Alexandra. From this Auricula, crossed with another named Victoria, I once raised some very good seedlings which gave

this season to examine each plant, and remove all weeds, dead leaves and mossy substances from the surface of the soil. All dirty pots can be scrubbed, so that when the plants are arranged in the frames they will present a smart and clean appearance.

T. W. BRISCOE.

IRIS PALLIDA VARIEGATA.

THE variegated-leaved variety of *Iris pallida* is a handsome plant, either in or out of flower. The variegation of the leaves is quite good and effective, and the plant, as a whole, is much superior to the other variegated-leaved Irises, such as *I. Pseudacorus variegata* or *I. foetidissima variegata*. Apart from the variegation of the leaves, which is finer than that of its two rivals, *I. pallida variegata* has better flowers, which are of a good lavender blue. The variegated form is quite hardy.

S. A.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Cucumber Plants which are intended to produce a daily supply in the winter should be given every encouragement to fill the trellis with short-jointed shoots before they are allowed to carry a crop. Remove rough, overgrown leaves and pinch the young growths at the second joint, so that they may never become crowded or entangled with each other. The longer the plants can be allowed to remain without fruiting, the better will be the result in the winter. Top-dress the bed frequently, so that the roots may be kept active. A night temperature of 70° can be kept up by slight fire-heat, the ventilators being left slightly open to ensure a sweet, healthy atmosphere. The latest sowing may take place now with a view to producing plants for fruiting in the beginning of next year.

Pot Fruit Trees.—There should be no delay in potting the main batch of early forced trees. The soil may consist of three parts turfy loam and the remainder of decayed horse-manure and old lime rubble, with a good sprinkling of crushed bones. Select the earliest varieties first, and give each tree a good soaking of clear water so that the soil may be removed with as little injury to the roots as possible. Pot carefully and work the soil in among the roots with a thin potting-stick. When the new soil has been made firm, the trees should be placed in a shady position and syringed daily while the weather is dry.

Strawberry Plants for Forcing.—The early plants should now be well established, and will benefit by frequent waterings of liquid manure in a diluted state. Keep the runners cut away, and give plenty of space between the pots to admit air and sunshine. The plants will benefit by light dustings of soot in showery weather.

Alpine Strawberries in Pots.—These plants should be grown in a well-ventilated structure. Give careful attention to watering and syringing. Gather the fruits before they are overripe, or the flavour will be inferior.

Plants Under Glass.

Primulas.—The earliest batch of plants should now be ready for removal from the cold pits to a well-ventilated greenhouse where protection from strong sun can be provided. Later plants for spring flowering may be allowed to remain in the cold pit for some time longer, but must be removed to safe quarters before sharp frost sets in.

Hyacinths.—Where pot Hyacinths are in demand, the bulbs ought to be procured and the first batch potted without delay. A good rich soil with plenty of sand should be employed, and when the bulbs are potted, the pots may be covered in a bed of sifted ashes until the pots are well filled with roots. Various bulbs should be potted now and plunged in ashes, so that good roots may be produced before the pots are introduced to heat.

Tulips.—These can now be potted in quantity and plunged in sifted ashes. When a good number of roots have been produced, some part of them may be placed in very gentle heat, as the Tulip, like most bulbous plants, does not respond readily to hard forcing; in fact, this is the cause of many failures. A good number of bulbs should be placed in each pot, so that a good blaze of colour may be produced.

Polyanthus Narcissi.—These should be potted now and plunged in ashes until the pots are well filled with roots, after which they may be removed to a mild forcing-pit as required. If only required for cut bloom, the most economical way is to place the bulbs quite close together in boxes of good rich soil.

The Flower Garden.

Hardy Annuals.—If an early display of these is required, the best way is to sow the seeds in September. The soil should be dug deeply, but ought not to be too rich, or the seedlings may become too soft to stand the winter. Many varieties should be sown in boxes and transplanted as soon as large enough. Antirrhinums, for

instance, may be sown at once and pricked into boxes as soon as large enough. Slight protection should be provided during sharp frost, or many may be lost.

Pentstemons.—Cuttings should now be taken from plants which it is desired to increase. If these are inserted in sandy soil now and shaded from sun, they are almost certain to produce sufficient roots to carry them through the winter, when they may be potted up and planted out early in April. These plants should produce abundance of bloom in June.

The Kitchen Garden.

Spring Cabbage.—The first plantation of Cabbage for spring cutting should take place as soon as possible. Ground recently occupied by Onions will suit the purpose well, and should only be broken up to the depth of a few inches. Plant in rows 18 inches apart and about fifteen inches between the plants in the row. As soon as the plants have started into growth, the surface ought to be broken up with a hoe. This will favour the development of the plants and destroy numerous small weeds. Harbinger, Early Offenham and Milecross Marrow are good varieties for present planting.

Mushrooms.—Beds may be made up now for the supply of Mushrooms in November, and as the days are becoming cooler, there need be no difficulty in obtaining a good supply of them. If horse-manure is available, it should be collected daily and placed in a well-ventilated shed, where it can be turned daily for about ten days, as a great deal depends on the proper preparation of the material. When thoroughly prepared, the manure should be removed to the Mushroom-house and beaten tightly together in a bed 14 inches deep. The spawn may be placed under the surface when the temperature of the bed has dropped to 80°. The atmosphere of the house can be kept moist by frequently syringing the walls and floor, but frequent damping of the bed should be avoided.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Kidney Beans.—Early frost will at once put a stop to the production of pods, in which case it will be wise to go over the crop now and gather all the pods that are still fit for cooking. These may be pickled in stone jars, when, with ordinary care, they will keep their colour and retain their crispness for a long time. Place the Beans in layers in the jar, and between the layers sprinkle some freezing salt; then fasten securely and store them in a cool cellar. It is most important that too much salt is not used, otherwise they will lose the colour and give a bitterness to the taste.

Climbing French Beans.—Where space will allow, a sowing should be made in a small pit where the plants could be trained to the wires. A house previously occupied by Tomatoes would suit them admirably, provided fire-heat could be given when required. Sow in small pots and plant out later. No attempt should be made to force them, and only use sufficient fire-heat to maintain a growing temperature. The greatest possible care must be exercised in watering at the earlier stages of growth, as, if over-watered, the leaves turn yellow, which most certainly ruins the crop.

Cauliflower.—At this season there is usually a glut of Cauliflower, which sometimes is difficult to dispose of, so that to prolong the season of consumption it will be well to draw the plants with as much soil attached to the roots as possible. Hang these head downwards in a cool, darkened shed, and spray them over each evening. In ordinary cases they will keep fresh for quite a long time.

Parsley.—Where Parsley has become coarse and shows a tendency to bolt, it should be cut over. If the weather continues fine, a good crop of young growths will appear. Older plants that are running to seed had better be got rid of, as these very seldom break away again.

Endive.—A frame or cold pit should now be prepared for this fine winter salad, and as moisture

is its greatest enemy, it is advisable to put about nine inches of ashes in the bottom before adding the soil. In planting, allow at least a foot between the plants, and admit air freely on all favourable occasions. As soon as the plants are of sufficient size, the foliage should be tied up for blanching; this must be done when they are perfectly dry.

The Flower Garden.

Tunica Saxifraga.—This pretty little rock plant, with its delicate lilac flowers, has been especially fine this season, and, strange as it may seem, if planted with full exposure to the sun the colour seems intensified. It appears to be perfectly hardy, and germinates freely from seed. As soon as the seed is perfectly ripe it should be sown in a box or pan and placed in the alpine frame.

The Herbaceous Border.—Now that the last of the occupants of the herbaceous border will be in bloom, stock must be taken of the plants requiring to be divided or moved. In a border of any description this annual overhaul is a necessity. Among plants that quickly exhaust the soil, mention may be made of the Monardas. If left more than two years without being divided, the flowers of these become small and weak in consequence. It may be well to remember that in dividing plants, only the strongest shoots from the outside of the group should be selected. There is, of course, great diversity of opinion as to autumn or spring planting, which can only be decided by local conditions. The object here is simply to note intending changes. Carefully note and label each plant to be treated, and on no account disturb the plants until growth is completed.

Carnations.—The earliest layered plants should now be rooted, and, if the ground has been prepared as previously advised, planting may commence any time after this date. If, for various reasons, this has not been done, care must be taken not to use fresh manure. This would encourage soft growth, which would undoubtedly suffer during severe weather. Where planting is deferred until spring, rooted layers should be potted and placed in frames, but the lights must be kept off unless in excessively wet weather.

Dog's-Tooth Violets.—As an edging to beds of spring-flowering plants or planted in groups in the rockery, there are, perhaps, no better subjects for this purpose than these neat little plants with their attractive foliage and equally attractive flowers. To get them established, the bulbs should be planted in a mixture of peat and loam, and no time should be lost in putting in the bulbs.

Plants Under Glass.

Cinerarias.—Although it is not advisable to house these plants for some time yet, they should be carefully examined for mildew, which usually makes its appearance at this season of the year, often the result of insufficient ventilation. Where this is observed, give the plants more room, and, if the weather permits, remove the lights entirely during the day, leaving a chink of air on all night. A dusting of soot round the pots will be very beneficial to the plants.

Calceolarias.—The same remarks apply equally to Calceolarias, only that in this instance green fly is the chief enemy which must be held in check. As weakness invites attacks from insects on all plants, every means must be taken to keep them in a good, healthy condition.

The Hardy Fruit Garden.

Strawberries.—If through stress of work or weather conditions the planting of young Strawberries was delayed, no time should be lost in having this done, so that the plants may become established before the winter. Should the ground not be sufficiently moist when the plants are put in, they must be given copious supplies of water until the roots have taken hold and become established. Autumn-fruiting varieties must not be neglected. The runners should be removed and the ground kept free of weeds. Perhaps the greatest enemy of these late-fruiting sorts is red spider, and if the plants are allowed to become infested, it is next to impossible to get rid of the pest, particularly at this season of the year.

JOHN HIGHTATE

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

DAFFODIL NOTES AND QUERIES.

AS one of the many readers of THE GARDEN who follow the Rev. J. Jacob's notes on the Daffodil, I venture to hope the following notes and queries may not be without interest. In September, 1911, I formed two beds, each 5 feet wide and 20 feet long; they were dug out of solid gravel to the depth of 2 feet 6 inches, the gravel removed, the subsoil loosened, and were made up with maiden loam and a sprinkling of leaf-mould; and quarter-inch bones were used at the time of planting the following bulbs:

Name of Variety.	Bulbs planted September, 1911.	Bulbs taken up July, 1914.	Increase per cent. in 3 years
<i>Triandrus hybrids</i> :			
M. Hume x T. albus	15	35	133
<i>Poets</i> :			
Almira	12	39	225
Chaucer	6	23	300
Comus	6	29	400
Dante	6	17	200
Horace	6	39	550
Homer	6	24	300
Musidorus	6	21	250
Recurvus	12	73	500
<i>Trumpets</i> :			
P. R. Barr	15	45	200
Victoria	10	61	500
W. P. Milner	20	79	300
Queen of Spain	20	40	100
King Alfred	6	29	400
Santa Maria	12	28	133
Mme. de Graaff	24	98	300
Weardale Perfection	6	29	400
M. J. Berkeley	25	39	50
Grandee	12	48	300
Henry Irving	10	59	500
<i>Incomparabiles, Barri and Leedsii</i> :			
Mrs. Langtry	20	94	350
Lulworth	12	84	600
Mrs. C. Bowley	12	61	400
Princess Mary	15	34	120
Hyacinth	12	61	400
Cirlet	3 (1 died)	4	33
Fairy Queen	12	60	400
Waterwitch	12	40	230
Frank Miles	12	75	500
Flora Wilson	12	38	215
Molly M. (seedling)	36	133	266

They were planted with a view to cross fertilisation and raising of seed—but of that I am not now writing; but last July they were dug up, with the results shown in the accompanying table. I am not sure how far those results are normal. When planted the bulbs were first size, and were obtained from one of our leading Daffodil houses. I may say smaller offsets are not counted, only bulbs of flowering size. For instance, I find on reference to my notes that the row of King Alfred, originally six bulbs, produced thirty-three flowers this season, and when dug up I found twenty-nine bulbs, all fit to plant separately; they are not, of course, all the same size. And now for my first query: What is the length of life of a trumpet Daffodil bulb? The original bulbs, I take it, would have been three years old at least, possibly more, when planted (that is, presuming they had been produced from offsets; if from seed, they would have been at least nine or ten years old). They have since produced offsets, some of which are three years old, and they themselves must be six or seven years old. Query No. 2: Those offsets being detached, will the original bulb, if planted, again set to work to produce more offsets, and, if so, for how long will this continue? I presume the oldest of the offsets will produce finer flowers than the old mother bulb (as I will call it); but I am not sure of this, so will call this Query No. 3. I am replanting my Poeticus this month; what assistance by way of manure can I give them? (Query No. 4.) I have

bastard-trenched the bed so that the bottom 12 inches of soil is now on top, and that would not appear to have been reached by the roots of any of the Daffodils. Is well-rotted cow-manure advisable if put well below the planting depth? (Query No. 5.)

The bulbs seem to have revelled in their conditions; they are enormous—certainly very much larger than normal. In taking them up I searched carefully for ravages of Merodon fly, but I only found five bulbs rotten or damaged, and they would appear to have been attacked by a cockchafer grub, two of which I found in the half-eaten bulbs. Basal rot accounted for the dead bulb of Cirlet (in 1912). All of the bulbs have given fine crops of flowers except M. J. Berkeley; this appeared to have yellow stripe badly the first year, and only gave me about six flowers. The second year I had ten and this year eighteen flowers, and the foliage was almost normal; but I understand it is a shy bloomer and its constitution not of the best, so I am doubtful if I shall replant it.

Southampton. HERBERT E. MOLYNEUX.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEAS DAMAGED (A. E. P.).—We do not see any trace of damage by insect or bird. The dwarfing of the flowers appears rather to be the result of a check to the growth, perhaps due to something amiss at the roots.

RUST ON HOLLYHOCKS (M. A. T.).—There is no certain cure for rust on Hollyhocks, but they can be kept fairly free from rust if grown from seed every year and the seedlings sprayed with a rose red solution of potassium permanganate from time to time.

SIX ANNUALS (Mrs. E. C.).—You do not say whether tender or hardy annuals are required, and if you are contemplating exhibiting in a competition class, this may be important. In these and similar cases much depends upon the wording of the schedule. *Nigella* Miss Jekyll, *Marigold* Orange King, *Godetia*, *Clarkia*, *Phlox* Drummondii, *Shirley* Poppy, *Rocket* Larkspur, *Scabiosa atropurpurea* varieties, *Sweet Peas* and *Eschscholtzia* in their best forms would be a good set to select from. Stocks, of course, are good, but if your soil is very heavy they may not respond quickly. Sow in March in well-prepared soil, and sow thinly if you desire good plant development and fine flowers. You had better use some soil fumigant and destroy the slugs during the coming winter. If you can give protection or have a sheltered garden, the Potatoes could be planted late in March or quite early in April. For clay soils, however, it is better to plant well-sprouted tubers in mid-April, as these often surpass those planted earlier in the open. Sow Carrots and Turnips in the first half of April; the Beans about the same time or a little later. The season, however, is a greater factor in the case than the time of planting, and late spring frosts are most trying. The leaf sent appears to be of the Balm, but a complete flowering specimen is necessary to enable us to determine.

TREES AND SHRUBS.

CULTIVATION OF NORTH AMERICAN GINSENG (Hong).—The Ginseng (*Aralia quinquefolia*) may be increased by two methods—by seeds and by root cuttings. When the first method is practised, the seeds are collected and sown in October; and when roots are used, sections half an inch or less in diameter are planted at the same time. The best soil is a light, friable loam, rich in humus. It must be deep and well drained, although permanently moist. Heavy soil is not suitable. The cuttings are planted about eight inches apart each way, and seeds

are sown with the object of thinning the seedlings to the same distance. Shade from bright sun is essential, and it is necessary to keep the soil about the plants clean by using the hoe several times during the year. The roots are lifted about September or October.

FRUITS OF PYRUS (E. B. J.).—The fruits of *Pyrus* (*Cydonia*) japonica have a strong flavour and odour, so that they are unfit to eat raw. A fruit or two in Apple tarts increases the flavour. They make an excellent jelly, though some people object to the austere flavour. The *Malus* (Crab) family make an excellent jelly, the flavour of which is softer to the palate than that of the Japanese Quince, *Pyrus japonica*.

THE GREENHOUSE.

TREATMENT OF HYDRANGEA (H. W.).—Do not prune back the shoots that have not flowered, as most of them should bloom next year. It is rather late for potting the Hydrangeas now, and if they require larger pots it would be better to wait until the spring. Still, you might give them a dose or two of liquid manure; the first should be applied as soon as possible, for on no account must it be continued later than the middle of September. The name of the flowering plant is *Clerodendron fallax*.

TREATMENT OF SCHIZANTHUS (E. O.).—Your plants of *Schizanthus* that have flowered this season will be quite useless for another year. Seed may be sown now, and the young plants should, when large enough, be potted singly into small pots, from which they ought to be shifted into pots 4 inches in diameter before winter. Then, early in the year, they can be put into those in which they are to flower. Failing conveniences for growing them during the winter in this way, the seed may be sown next February or early in March, and the young plants will then make rapid headway and form a good succession to those sown in autumn.

PALMS IN BAD CONDITION (E. O.).—There are not many Palms that will succeed in a cool conservatory, and if your query refers to *Kentias*, which we presume is the case, as they are so generally grown for decorative purposes, they require a little more heat than that to be seen at their best. Added to this, where they are cultivated in quantities for sale they are grown under very hot and moist conditions, in order to obtain effective-sized plants as soon as possible. The result of their tender upbringing is then quickly seen when they are placed under more adverse conditions. There is yet another important factor in the matter, which is that your plants may be starved at the roots—not, perhaps, that they need larger pots, but an occasional dose of one of the concentrated manures so much used may help to remedy the trouble. Palms that may be grown under the coolest conditions are *Rhapis flabelliformis*, *Chamaerops excelsa*, *C. humilis* and *Corypha australis*.

KITCHEN GARDEN.

FUNGUS ON MUSHROOMS (Enquirer).—We fear it will be impossible to kill stray fungus without damaging the Mushrooms, and think it would be best to clear the whole lot out and start afresh after thoroughly disinfecting the houses with carbolic or hot limewash.

SCARLET RUNNER BEANS ATTACKED BY INSECTS (R. F. L.).—Inject carbon bisulphide into the soil about the roots of the attacked plants at the rate of 1oz. to the square yard of soil. The fumes of this substance are deadly to all insect life and do not injure the roots of plants.

POTATOES ATTACKED BY BLACK SCAB DISEASE (H. E. I.).—The Potatoes are attacked by the Potato tumour or black scab. It would be best to refrain from growing Potatoes on the infested soil for several years, and, when Potato-growing is resumed, to select only varieties immune from the trouble. Meanwhile you must notify the Board of Agriculture, Whitehall Place, S.W., of the occurrence of the disease. A penalty attaches to failure to notify this to them, and they will advise you what to do. The disease is very infectious to Potatoes.

FRUIT GARDEN.

APPLE SHOOT FOR EXAMINATION (Constant Reader).—There is nothing on the shoots of the Apple sent to indicate the cause of their death. Possibly the tree is attacked lower down by canker or by some boring insect; but the cause, whatever it may be, is connected with a failure of the water supply.

APPLE TREES NOT DOING WELL (Argyllshire).—Something is wrong with the water supply to the young Apple trees, or they are growing in a draughty place where water is lost more rapidly than it can be supplied. We think it would be well to mulch the trees and see whether this would not improve their growth.

EARWIGS DEVOURING PEACHES (G. M.).—There are no more troublesome pests to get rid of in the garden than earwigs and ants. This is especially so when ripe fruit is their prey, as then it is not possible to apply drastic remedies without damaging the fruit. The two old-fashioned remedies are still the best, and if their application is persevered with they are effective, namely, a flower-pot on a stake with a bunch of dry hay or moss in it for Dahlias and other plants to which the earwigs are partial, and the hollow stem of the Bean stalk or any other hollow stem placed among the branches of fruit trees when fruit is attacked. To succeed means serious and long-continued attention. A large number of hollow stems should be placed in the trees, and the earwigs blown out into a vessel of water night and morning.

THE GARDEN.

No. 2235.—Vol. LXXVIII.

SEPTEMBER 19, 1914.

NOTES OF THE WEEK.

Our Sub-Editor Joins the Army.—It is with considerable gratification that we announce that our Sub-Editor, Mr. H. Cowley, has answered his country's call, and has joined the Polytechnic Corps of the London Rangers for as long as the war lasts. As an old Kewite, and as Sub-Editor of THE GARDEN, Mr. Cowley has made many friends, and we know that they and our numerous readers will join with us in wishing him every success and a safe and speedy return.

The National Rose Society and the War.—As the autumn show of the National Rose Society has been abandoned for this year, the Council of the Society, at its meeting held on the 8th inst., unanimously decided to send a donation of fifty guineas to the Relief Fund which is being raised by the Society's Royal patroness, Queen Alexandra.

A Beautiful Herbaceous Phlox.

—With so many excellent and charming Phloxes to select from it is difficult to pick out one that is much better than many others. That illustrated on this page, however, has done so well with us for several years that it certainly deserves special mention. Unfortunately, it has the unwieldy and foreign name of Hanny Pfeiderer, but we must not let this blind us to its excellent qualities. It is a strong and sturdy grower, attaining a height of about three feet, and its large, symmetrical flowers are produced freely in bold heads. Their colour is cream, changing to salmon, and each has a decided crimson centre that contrasts well with the outer colour of the segments. Plants can be purchased cheaply from dealers in hardy plants.

Geum Mrs. Bradshaw.—This beautiful scarlet border plant may be easily increased by sowing the seeds as soon as they are quite ripe. The soil must never be allowed to become dry before the plants are well through the surface, when they may be carefully pricked into boxes of good rich soil. If space is available, they should be allowed to remain in a cold frame during the winter.

Nicotiana affinis as a Cut Flower. Miss Jekyll sends us the following timely note on the sweet-scented Tobacco: "If this beautiful flower is cut in the evening when the bloom is expanded, it does not close again when put in water in the house; moreover, any of the flowers that may

be only in bud will open and remain open. It should have the addition of some rather solid foliage. Bay is always beautiful, and the rather pale green colour and solid texture of Skimmia are specially becoming. It remains many days in good order."

Beautiful Flower-Beds.—Some large flower-beds, charmingly filled, have been greatly admired in a public garden in Hampshire during the present

Potato and Corn Crops in Great Britain.—The monthly Agricultural Report, just issued by the Board of Agriculture, shows that the Potato and Corn crops in Great Britain are this year well up to the average, and that practically all corn has been harvested in good condition. Summarising the returns, and expressing an average crop by 100, the condition of the crops on September 1 indicated probable yields per acre which

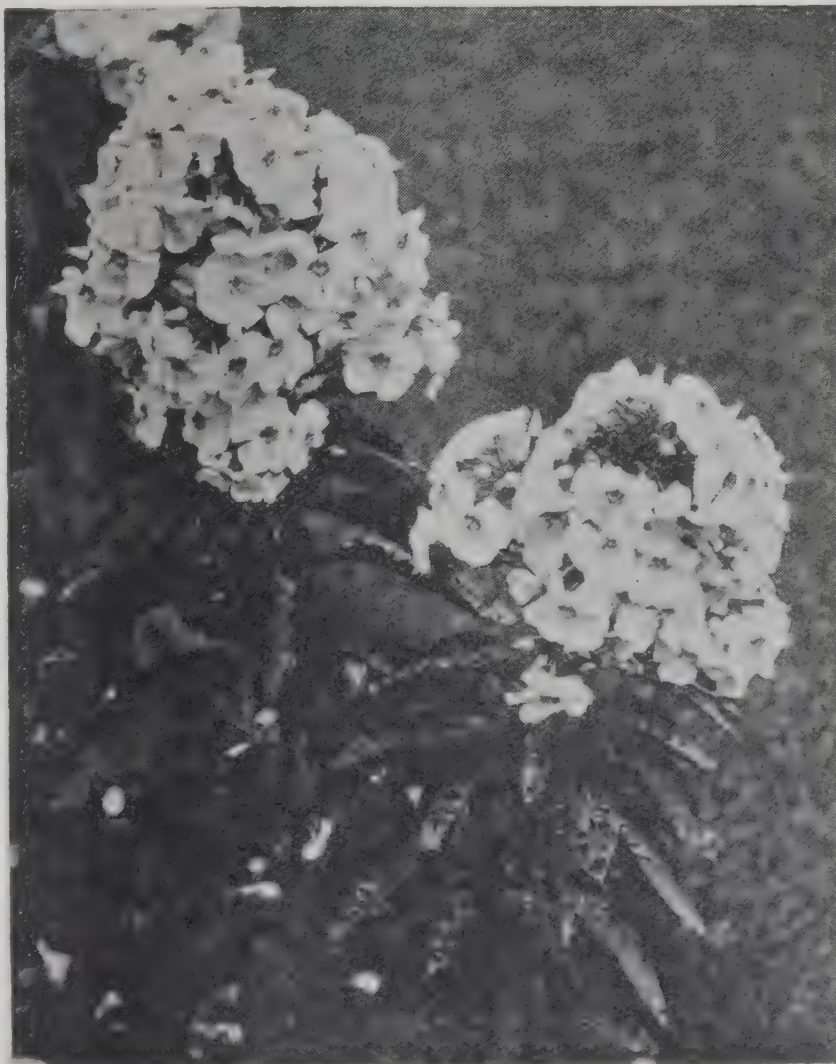
may be denoted by the following percentages: Wheat, 104; Barley, 99; Oats, 95; Beans, 101; Peas, 93; Potatoes, 102; Turnips and Swedes, 96; Mangolds, 99; and Hops, 109.

Vacant Land Cultivation Society.

—At a time such as this, when everyone is urged to cultivate as much food as possible, we are pleased to receive the annual report of the above society. Founded in London in 1908 by the late Mr. Joseph Fels, the society has already done valuable work in securing vacant plots and instructing suitable men to cultivate them to the best advantage. Since the war broke out, strenuous and successful efforts have been made to secure further land, and an appeal to seedsmen and gardeners for seeds and plants has met with a good response. The society is, however, badly in need of funds. Full particulars of its work can be obtained from Mr. H. J. Wright, 180, Fleet Street, London, E.C.

Dividing Christmas Roses.—The Christmas Roses are generally known by gardeners to be impatient of root disturbance, the result of which is almost certain to be the non-production of flowers the following year, especially if done in a careless way or at the wrong time. If possible, they should be left undisturbed; but as there are times when it is necessary to lift and divide, it may be of value to know that now is the best time.

Great care should be taken to extract the roots intact. In dividing the plant, let the rhizome be cut through with a sharp knife; then with two handforks pull the plant apart, endeavouring to keep with each part some of the strongest outside crowns. In replanting do not put manure near the roots, but a little decayed leaf-soil and grit will be helpful in encouraging the formation of new roots.



A YOUNG PLANT OF A BEAUTIFUL DWARF HERBACEOUS PHLOX. (See note on this page.)

summer. The groundwork in the centre was composed of Gazania splendens. Over this at 3 feet apart were half-standard Fuchsias of the varieties elegans, Lena and conspicua, respectively. The whole was edged with a broad band of Alyssum minimum. The rich orange-coloured flowers of the Gazanias, dark centres, and silvery reverse of the green leaves made a very rich and pleasing display.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Flowers for Wounded Soldiers.—At a time like the present, when all classes of society are anxious to do something for the Empire, I should like to appeal to the generosity of my fellow gardeners. There are now in London four general hospitals dedicated to the use of the Territorial Forces, that voluntary line of defence whose patriotism has hitherto saved us from the necessity of conscription. These hospitals are anxious to obtain plants and flowers, so that a bright and cheerful atmosphere may be maintained in the wards, where pain is bound to be paramount at this unhappy time. It occurs to me that exhibitors at the Royal Horticultural Society's shows at Vincent Square might like to send some part of their exhibit, either plants, cut flowers or fruit, to these hospitals at the close of the day, and that nurserymen and amateurs as well might care to join in this really charitable object. I should be

of £90 was realised and given, without any deductions whatever, towards the National Relief Fund." These are examples that might well be followed in other districts where flowers are abundant.

The Nemesia Sown in May.—The beauty and value of the Nemesia is well attested to in the photograph and note appearing on page 434. And I presume from their mature appearance they are the product of early sown seed, perhaps March, though no date is given. It may interest some to know we have a batch of plants about half grown to their usual size, with a good sprinkling of flowers as a result of being sown the first week in May in a cold frame. The light was kept on until after growth had commenced and then removed. This treatment and the removal of the first showing of flowers kept them back, with the result that they will be at their best about the end of this month (September), and, of course, continue in good order until stopped by frost.

—C. T., Highgate.

Lewisia Howellii in the Moraine.—It is interesting and valuable to observe from the

prospects of the immediate future. It has been confided to me by heads of firms of considerable importance that not only have orders dropped to a point of insignificance, but the settlement of accounts has been neglected by regular and esteemed customers to such a degree that the difficulties of the situation have become extreme. The long credit expected and allowed in all the trades connected with gardening has always been a problem fraught with trials for those upon whose shoulders rest the burden of organisation and control of business; but now, of all times, delay in settlement of accounts strains most seriously the powers and resources of the business man who is striving quietly but doggedly to keep things on the move. My belief is that those who have a real love of gardening in their hearts have also the grace of goodwill, and that a word of intimation that the payment of an account will relieve a tradesman's anxiety, and maybe help him still to keep his men employed, will not fail to achieve its object. The readers of THE GARDEN are not immune from the sacrifices imposed upon the country by the war, and no one may be blamed for exercising wise economy; but it seems to me that those who have been accustomed to obtain much of their enjoyment from their gardens may justly consider that by supporting their tradesmen as generously as they are able, they will be performing as commendable acts as by subscribing to relief funds. It is not the nurseryman and seedsman alone who need the kindly consideration of the patrons of horticulture. The builders of greenhouses and the heating engineers employ many hands, and theirs is a trade allied to the gardening world that is feeling the pinch sorely. At any time it is within the reach of only the well-favoured classes to erect extensive ranges of glass houses; but if such as have the means will arrange for extensions and improvements they may have had in contemplation to be put in hand at once, instead of postponing the work until the war is over, it may mean wages instead of no wages to some British workmen. The usual thing in the autumn is to look round and see what is wanted in the way of new implements. A new spade or fork, a barrow, a spraying machine, new clothes or hand-lights are among one's usual requirements at this season. Let us hope the orders for these things and for the usual garden sundries will not be withheld unless it is really imperative to do so, for it will be an added catastrophe not only to the individual tradesman, but to the workers and the nation, if trade is allowed to stagnate, with the consequent closing down or bankruptcy of business houses. My final word is in the ear of the trade themselves. Remember the power and importance of advertising. In flourishing times it is necessary to woo trade through the medium of advertisements. It is even more imperative when things are slow to fan the enthusiasm of possible buyers by judicious exhortation, and while realising the anxiety to shun every avoidable expense, I venture to opine that a business that is built up or largely maintained by the aid of advertisements demands advertisement now, and without it it is bound to languish. Let it not be thought by any reader that I assume the privilege or audacity to dictate to either buyer or seller as to what should or should not be done; but if, mixing closely as I do with traders and workers, I can indicate the needs of the moment and help to keep things moving, my epistle will have done no harm.—HEATHER BELL.



GATHERING ROSES FOR THE PRINCE OF WALES' RELIEF FUND. A SCENE IN MR. HICKS' NURSERY.

pleased to make all arrangements for collection and distribution in London if intending donors would communicate with me, either at Balls Park, Hertford, or at 34, Eccleston Square, S.W., and as regards country contributions, I would send the address of the four hospitals in question to enable parcels to be sent direct.—B. S. FAUDEL-PHILLIPS, *Balls Park, Hertford*.

Roses for the Relief Fund.—Mr. E. J. Hicks of Hurst, Twyford, Berks, has undertaken to give 1,000 Roses every Saturday so long as the season lasts, to be sold in Reading in aid of the Prince of Wales's Relief Fund. The first Saturday's sales brought in £15 15s. 8d., the highest amount, £2 9s., being collected by Miss M. Chalker. Mr. W. Easlea, Danecroft Rosery, Eastwood, Essex, also writes us as follows: "I am happy to say that one of the leading ladies of Southend volunteered to sell 2,000 Rose blooms which I offered. The sanction of the Mayor was obtained, and some scores of young ladies vied with each other in this work of love for their country. The 2,000 blooms were quickly disposed of, and another 1,000 sent in, with the result that a grand total

note by Miss Brown on page 434, August 29, that *Lewisia Howellii* is flowering for the second time this year in her moraine at Longformacus, Duns. I grow *L. Howellii* here also in a whinstone and lime moraine, but it has shown no tendency to bloom a second time. It flowered well in the spring, but it was left purposely uncovered during the past winter to see how it would stand in a moraine as compared with its conduct on rockwork. It looks as if the free drainage of the moraine would be a panacea for the loss of many plants through rotting off at the neck in winter in wet districts such as the West of Scotland. It is considerably drier at Duns, but the glass overhead may still be a desirable precaution.—S. ARNOTT, *Dumfries*.

The War and Trade.—Since my note headed "Help the Trade," which appeared in last week's issue, was written, I have been in contact with a good many people engaged in the horticultural and allied trades, and I have found, in spite of a most earnest desire to keep workmen employed, a great deal of real anxiety is felt in regard to

WINTER VEGETABLES AND SALADS.

WITHOUT in the slightest degree partaking in the sensational and extreme views which urge that the lawn should be converted into an Onion-bed, and that Cauliflowers in pots should occupy the conservatory, I fully agree that the unusual circumstances of the moment and the possibility of even grave emergency in the future justify, and indeed demand, that some special effort shall be made to produce as much foodstuff as possible; and every owner of a garden will be doing his duty by growing what vegetables and salads he can, either for his own consumption or to give to poorer folk, upon whom the burden of financial distress is likely to press heavily during the coming winter.

THE GARDEN has already given its readers sound advice in regard to the main crops that may be seasonably sown or planted during this month; but it may be that some will like to try their hand at a few things out of the ordinary run, and there are some kinds that are decidedly worth attention, especially where means of protection or facilities for forcing are available. One of the simplest things to grow is American Cress or Land Cress; but it is a decidedly useful component for winter salad, the leaves being charged with juices that are an excellent tonic. All that is necessary is to sow the seed in shallow drills in a position where a fair amount of moisture is afforded the growing plants. Keep the surface of the bed hoed, and as soon as large enough commence to pick the leaves. Corn Salad or Lamb's Lettuce is another very easily grown subject that affords a pleasing variation to the salad-bowl. Seeds may be sown either broadcast or in drills on any available plot of ground, and, by thinning as soon as the earliest plants attain four or five leaves, quite a small bed will yield a prolonged supply. Chervil sown on a south border or in a corner that affords some protection from severe weather will become useful for flavouring soups, minces, rissoles, &c.; and even now it is not too late to sow Winter Spinach in places where some protection, if only a little loose litter, can be afforded when bad weather comes.

Use of the Spare Frame.—Now is a time when the owner of a spare frame may with advantage try his hand at intensive cultivation on the French gardening system. A hot-bed should be constructed of slightly larger circumference than that of the frame, and as soon as the first violent heat subsides, the frame should be filled with well-prepared soil to a depth of 9 inches or 16 inches and made fairly firm. It is possible with such a frame to grow three crops simultaneously.

First sow Radish seed broadcast over the whole surface. Next draw drills 9 inches apart and sow thinly seed of a good Shorthorn Carrot; finally plant with a dibber Lettuces (of Cabbage variety) not less than a foot apart each way. The Radishes will rapidly attain a usable size, and can be pulled before the other crops require the space. The Lettuces should be cut while still young, and therefore tender, and thus the Carrots will be enabled to develop into a useful crop. An alternative combination would be Turnips in place of Carrots, and early forcing Cauliflowers in place of Lettuces. Several seedsmen offer specially selected,



A CORNER OF THE SPEAKER'S ROCK GARDEN AT CAMPSEA ASHE. THE GARDENS WERE FULLY DESCRIBED IN OUR ISSUE FOR SEPTEMBER 5.

quick-growing varieties of these things that are adapted to this system of culture. Where greenhouse space is available, French Beans can be sown now and grown on in pots to produce good winter crops, and space under stages should, during the winter, be utilised for forcing Rhubarb or Seakale, bedding the roots in a mixture of soil and manure, and using mats, canvas or even stiff brown paper to exclude light. Earthen chimney-pots may be placed over Rhubarb roots, Seakale or Chicory in the open beds; and if the space between the pots is filled with manure, leaves and straw, the crop will mature earlier.

HEATHER BELI

CHRYSANTHEMUMS IN SEPTEMBER.

THE plants are now making rapid progress, the wood is also hardening well owing to the recent hot weather, and so cultivators will be well advised to feed liberally all plants before they are placed under glass. One week of feeding in the open air is of more advantage than two weeks under glass, because any undue forcing of the growth will only result in weakening the stems of plants that are being grown for the production of late flowers. The feeding of those plants for the production of large blooms at the end of October and during November for greenhouse and conservatory groups must be continued after the plants have been placed under glass, as the flower-stems are firm and the strength of the plants will go to these stems and buds.

Top-Dressing and Feeding.—

A few years ago it was considered sufficient if one good mulch was put on; but in these days the work of top-dressing is continued from the early part of August to the end of September and even later. Instead of putting on a thick layer of soil and manure, the cultivator should sift through a half-inch mesh sieve some good broken loam that has not been previously used and some quite rotted manure in equal proportions. An approved chemical manure should be mixed with the loam, and organic manure according to the directions given with it. The best way to mix is to pass all through a sieve together. Sprinkle just sufficient of the compost on to cover the roots showing on the surface, and always water through a rosed watering-can. In the course of a week, perhaps less, another sprinkling may be necessary, and in this way a mass of healthy roots will be secured on the surface, which can be fed regularly.

Suckers.—The surface-dressings always encourage suckers to grow, and these must be carefully removed while quite small until the latter part of October. Sometimes they may be broken out of the soil without much trouble; but

if a knife is used, care must be taken not to sever the roots at the same time.

Stem Shoots.—These, too, grow rapidly at this season. They must be rubbed off regularly from the axils of the leaves, as they rob the plants of much strength if left to grow to a large size. Some varieties, notably Hon. Mrs. Lopes, do not produce soil cuttings freely, and do not bear stem ones at the base. Where this is the case, the cultivator should leave the shoots on after the end of September for insertion as early cuttings, in case better ones cannot be procured.

Syringing the Plants.—This is very beneficial if done about five o'clock in the afternoon on warm days. Especially is it helpful in cases where the wood is hard and the stems of the buds too. The water must be tepid; then the buds will swell freely. The syringing tends to keep the foliage free from black and green aphides without the use of insecticides. AVON.

CLEMATIS MONTANA ON A SPRUCE.

THE illustration on this page shows what pleasant surprises a garden will provide for its planter if now and then he will let a plant have its own way and make and carry out its own arrangements. It must be twenty years since this Clematis was planted at the foot of a Walnut tree that overhung the road and filled the space behind the wall just to the left of the lodge. In the Walnut season it made a target for every small boy who could find a loose stone in the road. Sometimes the stone hit a nut and fell with it into the road again, but more often the stones missed their mark and fell into the garden, and it was scarcely safe to remain in that part of the garden except during school hours. This trouble, added to the fact that the Walnut shaded the best part of the border and was too big for its place, led to its being cut down; but as the Clematis was not injured in the operation we trained it on to the wall, and it soon ran all along the top and hung down, as can be seen in the illustration, into the road, to be a real Traveller's Joy when in full flower. Then it decided for itself that it would climb into the Spruce, and now it has reached to the very top of it, and the trails that hang down flower beautifully each May. In early autumn and onward till the winter, winds scatter the fluffy seeds, give a sort of encore turn, and once again make a white pillar of the tree. The root of this Clematis is close behind the wall in the very left-hand of the picture, and the stem is by now quite a tree trunk; and looking at it and the pillar of snow nearer the gate it is quite hard to believe the two are parts of one plant. The combination of the dark green of the Spruce and the white flowers of the Clematis is a very pleasing one, and where trees to which no special value is attached exist, the Clematis might be planted for the purpose. I should like to see the curtain of blossom hang right down the wall, but passers-by think otherwise, and shorten it up as high as they can reach. What pedestrians leave is further pruned by folk in carts, so it remains at a regular height from the ground like trees in a park browsed by cattle. Anyway, the Clematis flowers have provided a substitute for the vanished Walnuts without endangering my skull. E. A. BOWLES.

NOTES ON CARNATIONS.

DIFFERENT people have different times for planting out layers to stand the winter and bloom the next year. I like to plant in the second, or at latest in the third week of the present month. The reason is that the layers are then well rooted and transplant with efficient balls, also that there is time for the plants to be thoroughly established before the winter, and consequently in a condition to withstand the evils of that season. The principal points to observe in planting are

produce single blooms of the best quality, but it must be understood that close planting and layering are for decorative purposes only.

Plants to be Wintered in Pots may, and should, if at all convenient, be seen to at once. If the plants are to be satisfactory for planting out in spring, it is important that the flower-pots in which they are to be wintered should be large enough to enable them to gain strength, and the very weakest only be placed in 3-inch pots, stronger ones in 4-inch, and very strong layers in pots of a slightly larger size. If wet weather sets in, the plants should be protected by sashes at once and kept as dry as it is possible to keep them to permit of a slow growth. It is invariably at this period that disease attacks the foliage, though it may be later until it is apparent, and wet or damp is invariably the predisposing cause.

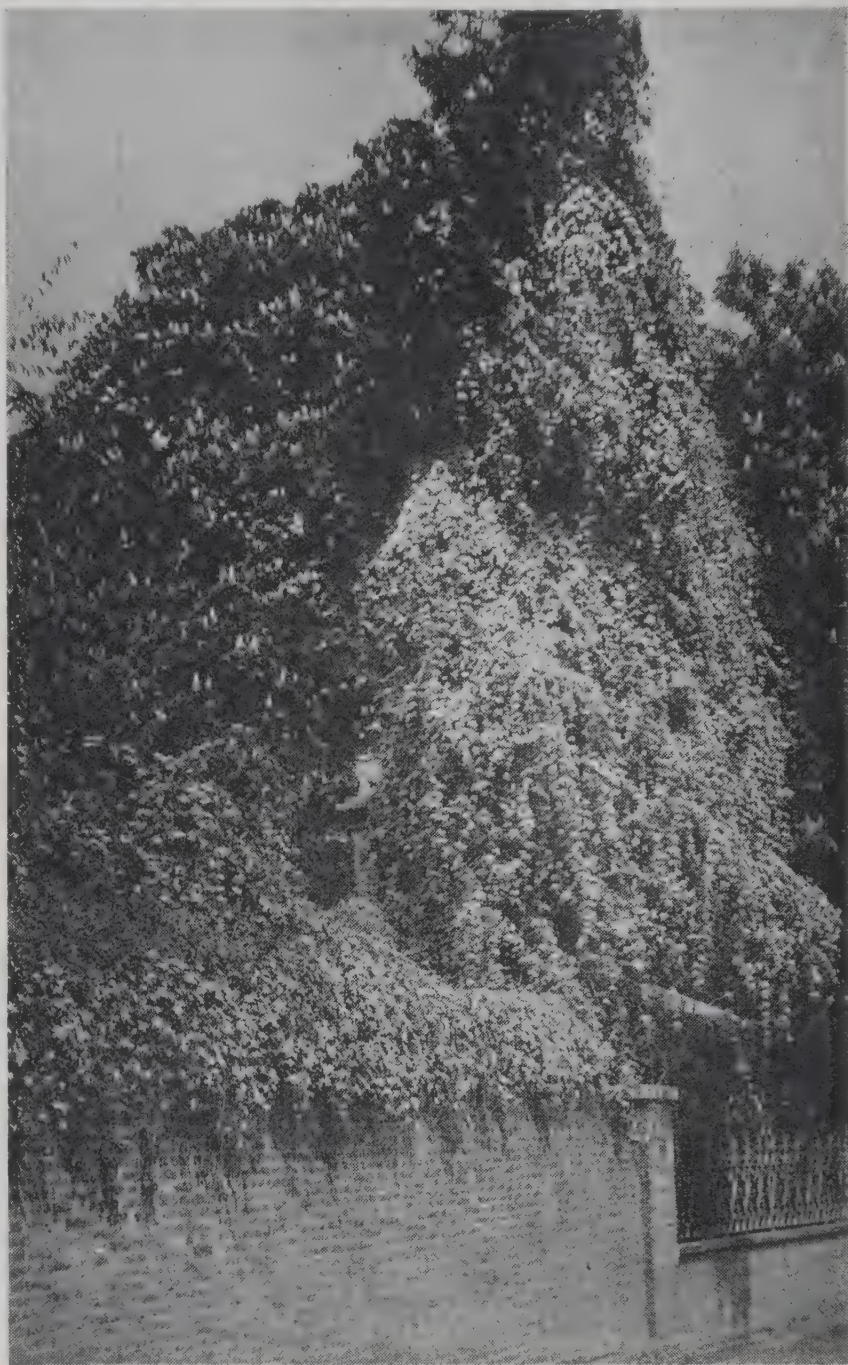
Seedling-Raising is an engrossing side issue, and seeds will now be quite ripe on plants in the open. The seed-vessels should be preserved with the seeds intact, in which they can be perfectly well kept till the spring. Malmaisons still in frames must not be left there so long as to become victims of leaf disease. The watering of these is by far the most important part of their management now and onwards, and no more water should be applied than just enough to preserve them in perfect health, nothing in the way of growth extension being attempted. If the plants can be stood on a cool base, it is much to be preferred—owing to a certain amount of moisture being conserved in the under part of the pots—to standing them on open trellises.

Late-Flowering Plants must be treated to enough moisture at the roots to favour the due development of the flowers, and the atmospheric conditions should similarly be favourable to that end. But forcing of any kind only ends in weakened stems, and blooms flaccid and wanting in colour. The plants after flowering are worthless. The time is one of quiet waiting generally as regards Perpetuals, though some growers have a very profuse display already, which will, no doubt, be discounted by a breakdown in the supply of bloom later. I have still numbers of flowers on second year plants, and these are so promising that

unbloomed stock would appear to be almost a superfluity. Meanwhile the latter are allowed to come along slowly to make sure of a good midwinter display. We have quite a nice lot of planted-out material, some of which will, before this appears, be lifted and potted for house decoration later, and this simple phase of Carnation growing might well be considered on its merits by those whose means do not allow of special treatment. In my next instalment I shall hope to have a good deal to say about Perpetuals.

Prestonkirk, N.B.

R. P. BROTHERSTON.



CLEMATIS MONTANA GROWING OVER A SPRUCE TREE IN MR. E. A. BOWLES' GARDEN AT WALTHAM CROSS.

to plant shallow rather than deep, the Carnation being suffruticose, and therefore subject to disease in the stem when that is buried unduly. Then, provided the soil has been thoroughly pulverised and in suitable condition at the time of planting, it ought to be made very firm round the plants. If these are very strong or tall, a short stick should be afforded each to steady it until established. In heavy soils in which moisture fails to pass away rapidly, it is worth forming the beds in a convex form rather than flat. Beds intended for effect may be planted much closer than those which are expected to

THE GIANT ASPHODELS.

AMONG hardy perennial herbaceous plants the Giant Asphodels occupy a pinnacle of their own, an impregnable position from which they are not likely to be displaced. To realise this in fullest measure, one has to see them rightly placed in the garden in the heyday of their summer beauty rearing their lofty spires to 8 feet or 12 feet high, when, by reason of a stateliness which raises them head and shoulders above all other flower plants of their time, they simply impel admiration. In other groups of herbaceous plants—in Lily, Larkspur, Sunflower and Torch Lily—fine floral effects and not a little picturesqueness are available. These, however, have a beauty apart which does not come into competition with the noble Asphodels, and were it otherwise it could not displace them from their high estate. In a word, therefore, they are unique, ranking high in the estimation of those who garden chiefly in the open air, and higher still with those who, realising their fuller value when amid suitable environment, so dispose them in shrubbery or woodland that fresh pictures are added to the landscape worthy of the plants themselves. For such gardening as this these Asphodels are well suited, none appearing to greater advantage than those seen springing from a groundwork of dwarf shrubs or in near proximity to Holly or Yew, which, apart from their protective influence, mirror them into fuller life and beauty, constitute a fitting foil—a frame it may be—to the picture-making effects of the whole. For the dark foil mentioned, the white *Eremurus himalaicus* is peculiarly well suited, the others appearing to greater advantage where light filters on to them from behind. It is amid such scenes, too, that the plants admit of free grouping, and while finding a congenial home are freed from the frequent risks of digging, hoeing and the like, inseparable from the ordinary border. For the latter I would only recommend the smaller-rooted species, as *Bungei*, and *Shelford*, those of the robustus type having a greater root spread—the rope-like thongs radiate like the spokes of a cart-wheel from a common centre—requiring more space, with immunity from disturbance.

Adaptability and Grouping.—Interspersed with the foregoing remarks will be found suggestions as to the adaptability of these plants for shrubbery and woodland. In such places they not only display themselves to greater advantage, but receive protection from high winds, and, best of all, from the disfiguring and sometimes damaging effects of spring frosts. For such as *E. robustus* and its varieties and *E. himalaicus*, the early risers of the group, such protection is more necessary than for those coming later. Apart from this protection, both shrubbery and woodland have an influence for good on the longevity of the floral display, the flowering lasting longer in such than in the fuller sunlight of the border. In reality I do not advise the planting of these

Eremuri in the border, for reasons already stated. For the thousands of those who possess no woodland and comparatively small shrub borders, however, I would suggest the selecting of a place apart where comparative immunity from disturbance would be ensured. In such, with a south-west exposure, the plants would be safe. In grouping, it is only necessary to observe informality, with abundant room for development. "Massing," so called, is to be discouraged, and in place thereof that easy disposal of the plants which borders on the natural. Where dwarf shrubs are used as a groundwork, these naturally correct attempts at more formal planting, besides playing an important part otherwise. Where planting is being done over a large area, the individuals need not be nearer than 5 feet or 6 feet asunder.

Soil Requirements.—These *Eremuri* are not fastidious as to soil, and are of quite easy cultivation in all classes of loam provided they

GARDEN FRITILLARIES.

(Continued from page 451.)

Fritillaria pontica.—There is a small group which always gives me pleasure to look at because of something about the flowers that appeals to me as being "blue-blooded." In colouring they are insignificant. In fact, *pontica*, the best of them, is almost entirely pale green, but their large, long bells, generally solitary, are very handsome in shape. They have no chequering, but a rich, glaucous bloom covers the flower, and the stems are taller and more slender and rigid than in some of the commoners of the family. With *pontica* I should place *Elwesii* and *acmopetala*. They are good perennials, and have showy, erect seed-pods.

F. Thunbergi is an interesting little Japanese species, seldom seen in gardens, yet almost a weed with me—it spreads so easily. It represents a very distinct section, which has slender leaves



A COLONY OF SEEDLING GIANT ASPHODELS OR EREMURI.

are well drained. One of the finest solitary examples of *E. robustus* that came my way a dozen or more years ago was five years planted in light sandy soil and measured 11 feet 6 inches high. Warmth of soil—that promoted by good drainage—appears to be essential, the plants abhorring clay soils of a close, tenacious character. For the giants of the race, in addition to depth, a considerable superficial soil area should be prepared, seeing that the great roots extend to 3 feet or more from the central crown. To sum up, well-cultivated, well-enriched, amply drained positions of 6 feet diameter should be prepared, and in such they will be happy for years. For those of lesser vigour and root spread, one-half of this diameter will be enough. All, however, merit generous treatment and repay it. Next week I hope to give some particulars of the various groups into which these noble plants can be conveniently arranged for purposes of cultivation. E. H. JENKINS.

(To be continued.)

with curled, hook-like tips, and the little masses of grey foliage that it makes are really more ornamental than its flowers, which are rather lacking in character. The Fritillaries seem full of puzzles to the botanists. On one hand they can hardly be separated from the true Lilies; on the other, they show such differences in essential characters that many botanists would split them up into several genera.

F. discolor is one of these abnormal forms. It is an uncommon plant, thoroughly established with me, which has also been named *Korolkowia discolor*. It is handsome enough, and wins quiet admiration, but is not very showy on account of the large leaf-like, grey bracts which subtend the flowers. The star-shaped flowers are held almost horizontally on short stalks, and have a quiet colour-scheme of greenish yellow and crimson with crimson anthers. This flowers in early March, and grows about eighteen inches high. Like the rest, I have it in soil on the heavy side.

F. macrophylla is another strange plant we now recognise as a Fritillary, although Wallich named it *Lilium roseum*, and Lindley, *Lilium thompsonianum*. It bears a long panicle of rosy lilac flowers in April and May. Loam, leaf-soil and limestone are recommended for it, but I never succeeded in keeping it very long.

F. sarana (Linnaeus' *Lilium kamtschaticense*), the Black Lily, is another rather difficult plant both to place rightly in the herbarium and to grow properly in our gardens. The blackish maroon flowers, with yellow anthers, are very striking.

F. obliqua, however, which also has blackish, handsome bells, I do manage with success. I first saw and admired it in the garden of the Rev. Arthur Boscawen, and that prince of gardeners afterwards sent me a stock which gives me no difficulty in keeping, although I cannot say it spreads much.

F. aurea and **F. armena** are delightful little species, so cheap that everybody should plant them by the hundred. *F. aurea* is from the alpine pastures of Cilicia, and is a beautiful little subject for the alpine-house. *F. armena* also comes from Asia Minor, and small collected bulbs are generally sent out.

F. pyrenaica, from the Pyrenees, is an easily kept plant, and I like it for its graceful habit as well as for its rather dark bells. It grows about a foot high or a little less, and carries solitary fleshy bells, almost entirely purple maroon outside, but worth lifting to look at the glossy green within.

It is rather strange that while some of our easiest species come from Asia Minor and other places, with climates quite opposite in their general conditions to our own, yet when we get hold of the alpine species of Europe they often prove quite intractable. Twenty to thirty years ago the gardening papers used to ring the praises of the beautiful

F. Moggridgei, which makes sheets of yellow in the upland slopes of the Maritime Alps, and of its close relative, the plum purple *Burnati*. "Very easily managed," was the comment on them, and further particulars were not thought necessary; but I do not know a garden where they exist to-day, nor do nurserymen any longer list them. Who will tell us their secret?

R. W. WALLACE.

(To be continued.)

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Campanula Norman Grove.—A pretty hybrid Bellflower said to have resulted from crossing *C. carpatica* White Star and *C. tommasiniana*. As a matter of fact, there is little or no apparent influence of the cross save in the slight semblance of foliage to the last-named kind. The plant is barely 6 inches high, flowers blue, profusely borne above a neat habit. The flowers are horizontally disposed after the manner of *C. Stansfieldii*. Its best flowering season is said to be June, its present

flowering the result of stopping and late propagation. From Messrs. T. B. Grove and Son, Sutton Coldfield, Birmingham.

Amaryllis Belladonna speciosa purpurea.—

A very handsome, richly coloured form whose stems are also of an attractive colour shade. The variety is bold and freely flowered. From Messrs. Robert Veitch and Co., Exeter.

Lilium Biondii.—A very graceful new Chinese species whose reflexing, orange-coloured flowers are heavily spotted with crimson. The linear leaves are 3 inches or 4 inches long and thickly crowd the lower parts of the stems, which reach about four feet high.

Aster Amellus King George.—Quite the largest of the Italian Starworts to date, the flowers reaching nearly three inches across and of a good blue colour. In a word, the new-comer



A SPRAY OF THE NEW DWARF ITALIAN STARWORT, *ASTER AMELLUS KING GEORGE*.

should prove to the early border what *Climax* is to the late border. The *Lilium* and this Starwort came from Mr. Amos Perry, Enfield.

Gladiolus Lord Alverstone.—A rather handsome, well-formed spike with flowers of good substance, coloured a deep ruby crimson. From Messrs. James Kelway and Son, Langport.

Dahlia Lovely (Decorative).—The flower is of good size, and coloured a refined and pleasing yellow shade.

Dahlia Etoile Rose (Garden Cactus).—The predominating shade is pink, and very pleasing withal.

Dahlia Stella (Collarette).—Of pronounced scarlet and white colouring, very striking and effective. These were shown by Mr. C. Turner, Slough.

Dahlia Rotiier (Pompon Cactus).—A pretty and useful sort for cutting, the reddish florets having pinky white tips.

Dahlia Marguerite Phillips (Cactus).—The florets are somewhat broad and quite pure white.

Dahlia Kismet (Cactus).—A graceful variety in which the narrow, incurving florets are coloured a reddish carmine.

Dahlia The Swan (Cactus).—Quite pure white, with acutely pointed florets.

Dahlia Mrs. Edward Drury (Cactus).—The colour is reddish scarlet in a particularly handsome flower. These five were exhibited by Messrs. J. Stredwick and Son, St. Leonards.

Dahlia White Star.—A semi-double-flowered seedling from *Crawley Star*, also recognised as the *Cosmea*-flowered *Dahlia*. The white is quite pure in a flower of medium size. This variety should prove invaluable for cutting by reason of its purity and informality.

Dahlia Worth Star.—This is also of the same race, slightly more cupped and formal-looking, and coloured a rosy mauve with gold centre.

Dahlia Eden (Collarette).—We know of nothing in its section to equal this in purity and substance. The stem, too, is excellent, and carries the flowers well up. Both inner and outer florets are exceedingly chaste and pure. These three were shown by Messrs. J. Cheal and Sons, Crawley.

The foregoing Dahlias were adjudicated upon by a joint committee of the National Dahlia Society and the floral committee of the Royal Horticultural Society; hence are entitled to the first-class certificate of the former and the award of merit of the latter society.

NEW FRUIT.

Blackberry Himalayan Giant.

We did not see this variety, which was sent up from Wisley for inspection. From Messrs. Laxton Brothers, Bedford. Award of merit.

NEW ORCHIDS.

Cattleya Sybil variety Lord Kitchener (*C. aurea* × *C. iridescens*).—

A striking and beautiful novelty. Through the centre of the sepals and petals runs a golden band, from which point this

colour is suffused with salmon rose. The lobe of the lip is of rich crimson, the basal half of golden orange hue. A very remarkable variety. From Messrs. Hassall and Co., Southgate, N. First-class certificate.

Cattleya iridescens aurifera (*C. bicolor* × *C. Eldorado*).—Sepals and petals golden, the well-developed lip of rich purple. Exhibited by Messrs. E. H. Davidson and Co., Twyford. Award of merit.

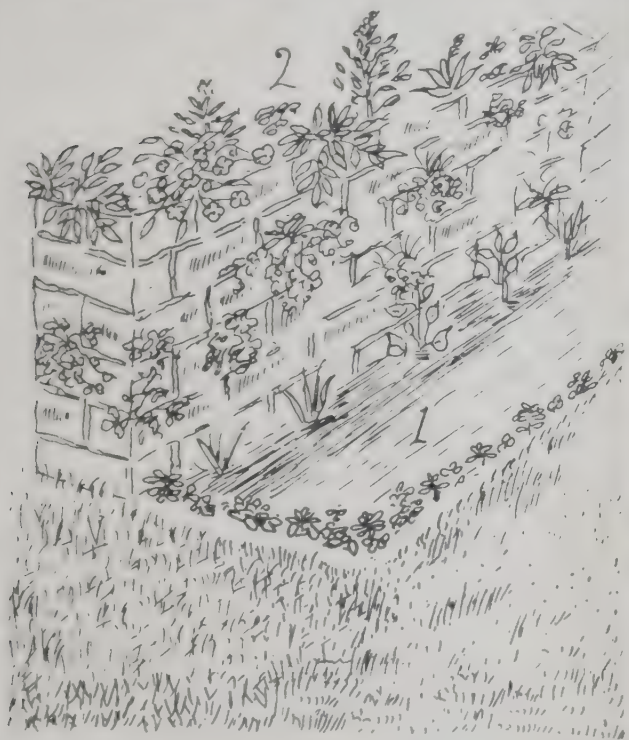
Laelio-Cattleya Hyone McBean's Variety (*L.-C. Ophir* × *C. aurea*).—A charming variety in which the sepals and petals are golden, with a suffusion of salmon. The handsome lip is of rich crimson, freely reticulated with gold at the base. From Messrs. J. and A. McBean, Cooksbridge, Sussex. Award of merit.

All the foregoing were shown at the Royal Horticultural Hall on the 8th inst., when the awards were made.

GARDENING FOR BEGINNERS.

BEDS AND BORDERS FOR SPRING FLOWERS.

A FINE display of blossom may be obtained from bulbs and other flowering subjects in spring in a very small garden. Every year cultivators like to have some fresh feature in their gardens, and if they are not able to



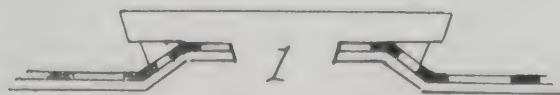
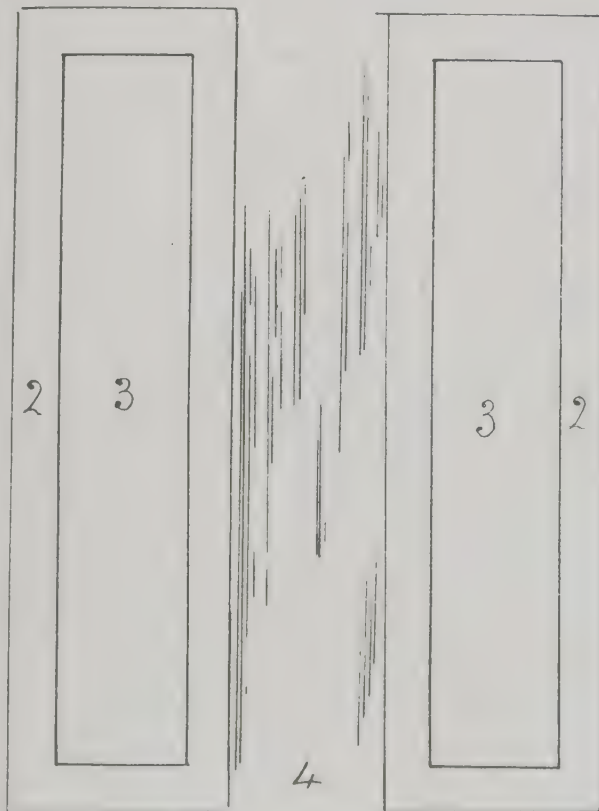
A.—SHOWING DESIGN FOR DRY WALL AND BORDER.

make new beds, they can at least have fresh designs.

Old Stone or Brick Walls.—Where these are available—I mean really old walls more or less broken, as only such are suitable—the holes may be filled up with a mixture of loam and a small quantity of clay. The clay must be used to form cups in the face of the wall, where odd stones or bricks are removed, to help to retain the finer soil and the roots of the plants. Leaf-soil should not be used; it is too light and dries too quickly. Soil must also be placed on the top of the wall. Where walls are not now in existence, and material for them is readily available, they may be built to form a background in a suitable quarter, or as an ornamental division fence. The height of the wall should be in proportion to its surroundings and its length. If more than 50 feet long, it may be 30 inches high; if under 20 feet, 18 inches will be high enough. Mortar need not be used in the construction of these walls; they may be dry-built or with layers of ordinary soil between the stones or bricks. Such walls are splendid for facing up broken banks; then a nice wide border for plants can be made at the top as well as one at the foot, as shown at No. 1, Fig. A. The border may be filled with bulbs, early and late flowering Narcissi, with Snowdrops and Polyanthus at the foot of the wall, and a front bordering of Aubrietias. At the top, No. 2, Wallflowers, Aubrietias, double and single flowered Arabis and Sedums, Saxifrages and similar kinds of plants should be planted in irregular clumps. When well planted and the arrangement is good, these old walls and borders do not entail much labour in maintaining them in a satisfactory condition. The border, No. 1,

will be available for summer-flowering subjects in due course, and the wall, with its top border, may be easily furnished with a few additional plants.

Formal Beds.—In many gardens there is only space for long, narrow borders on each side of the path leading to the dwelling-house. These borders are so placed that all their occupants can be seen from the windows, and, according to the taste of the owner, they may be filled with brilliantly flowered bulbs or the more subdued tones of the Wallflowers, Polyanthus, Primroses, Aubrietias, Arabis, &c. No. 1 represents the dwelling-house; Nos. 2, 2, broad bands of Aubrietias; Nos. 3, 3, double Arabis, with dot plants of golden yellow Wallflowers. Or Nos. 2, 2 may be double Arabis; Nos. 3, 3, blue Forget-me-nots, with scarlet Tulips planted 1 foot apart each way. Many schemes of planting may be carried out. No. 4 represents



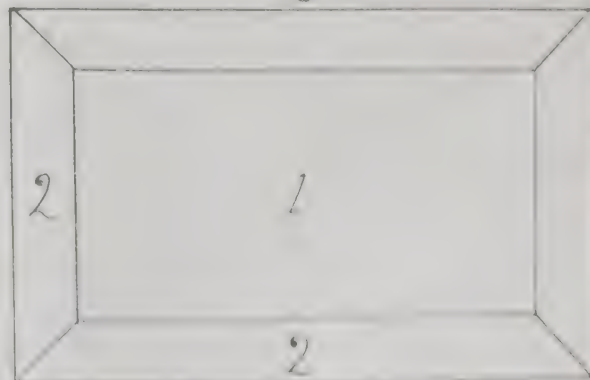
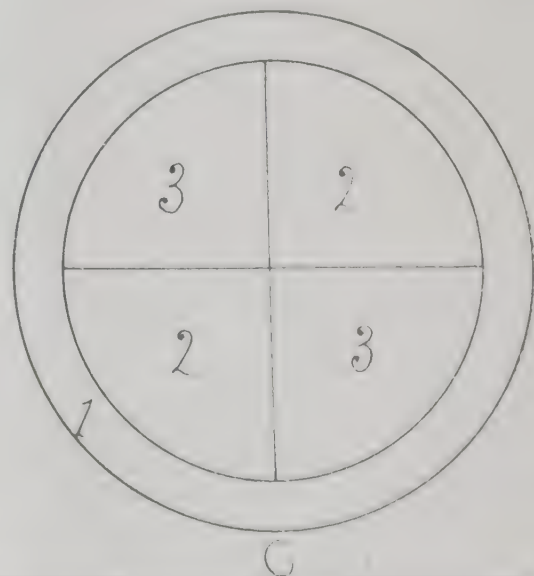
DESIGNS FOR BORDERS IN FRONT OF A HOUSE.

the path. Then there are isolated beds in gardens, and all the more important ones are round, oval or square in shape. Complicated or fantastic designs never look well; especially is this the case where the beds are small. The designs of Figs. C and B are given as guides only, as many other ways of filling the beds may be adopted. A red, white and blue bed may be had by planting Fig. C as follows: No. 1, blue Myosotis; Nos. 2, 2, white Tulips; Nos. 3, 3, scarlet Tulips. Hyacinths may be used instead of Tulips. No. 1, white Daisies, with the whole of the centre of the bed filled with Blood Red Wallflowers, is another scheme; or, No. 1, red Daisies, the whole of the centre blue Myosotis, with dot plants of white Hyacinths or white Tulips. Fig. B shows a raised bed. This is a good way of treating very heavy

soils, where the plants must be grown in them throughout the winter months. These beds have a very charming effect, and may be filled in various ways. The centre, No. 1, Polyanthus, mixed colours; No. 2, Aubrietias or Giant White Daisies—the red Daisies would clash with some of the colours of the Polyanthus. Wallflowers may be planted with Arabis as an edging. No. 1, white Hyacinths; No. 2, red Daisies, or *vice versa*—white Daisies and red Hyacinths. The latter are too formal for edgings. Arabis, Aubrietias, Myosotis and Daisies are the most effective as edging plants. G. G.

HOW TO TREAT TUBEROUS BEGONIAS AND GLOXINIAS.

TOWARDS the end of the summer the more forward plants of the above show signs of exhaustion. Undoubtedly many bulbs are weakened now owing to being improperly treated. Scores of plants, which are healthy with the exception of a few basal main leaves, are allowed to become dry too early; consequently the tubers gradually lose much strength in the autumn and start badly the following spring. Such plants should be fed regularly with weak doses of manure-water or other approved stimulant. When the Begonia leaves assume a yellow tint, stop all feeding and also gradually withhold clear water. Gloxinias and Gesneras: When all the flowers have faded and the leaves begin to droop, gradually withhold water, and only give one watering after all the leaves are removed. Retain the tubers in the soil in the pots until next spring, and keep them in a medium temperature, never nearer to the hot-water pipes than 2 feet. Cover the pots with mats; then the tubers will not dry-rot. AVON.



B AND C.—SUGGESTIONS FOR FORMAL BEDS FOR SPRING EFFECT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Tomatoes.—The plants from which supplies are expected in the winter should be setting fruit freely, and will require careful attention to watering. Examine the pots several times daily, and water thoroughly as it becomes necessary. All side shoots should be removed as they appear, and when sufficient trusses have set, the top may be pinched out of each plant. Liquid manure should then be given, and the roots may be top-dressed with fine loam and artificial manure. Seeds can now be sown to produce plants for early spring fruiting. Sow thinly in pans of fine soil, and when the young plants are through the surface, the pans should be placed quite close to the roof glass in a well-ventilated pit. In order to keep the plants stocky, pot into small pots when large enough and avoid cold draughts during the winter.

Early Vines.—If ripe Grapes are desired in April, pot Vines should be selected at once and placed in an exposed position, preferably a south wall or in front of some forcing-house facing south. Let the Vines be cut back to the desired length at once, so that the wound may be dried up and a serious loss of sap avoided. These Vines should be started early in November. In the meantime the roots must not be allowed to become too dry.

Ripe Grapes.—Bunches of ripe Grapes should be frequently examined and all decaying berries removed. Ventilate the house freely and protect the bunches from scorching sun, especially black varieties, which soon lose their colour through exposure.

Plants Under Glass.

Mignonette.—Seeds may still be sown to produce plants for flowering in the spring. Five-inch pots should be used, and the soil may consist of rich loam, which should be mixed with lime rubble in place of sand. Let the soil be moderately dry and make it very firm. Sow the seeds thinly and place the pots in a cold pit, which must be protected from strong sun until germination takes place. When large enough, the seedlings should be thinned to four or five in each pot. As soon as good growth has been made, the plants may be removed to the shelf of a greenhouse, quite close to the roof glass.

Cinerarias for winter flowering should be removed from the cold pits to a well-ventilated greenhouse. Examine the plants and, if necessary, fumigate before their removal from the pits. Later plants in small pots should now be transferred to their flowering pots. Keep the pit close for a few days until the plants are re-established, after which air should be freely given. The most forward plants may be freely watered with weak liquid manure from the farmyard.

Lachenalias.—The bulbs of these charming plants should now be potted in well-crooked pots. The soil may consist of two parts rich loam, one part leaf-soil, and the remainder of cow-manure and rough sand or road grit. Six or seven bulbs can be placed in 5-inch pots and covered with half an inch of fine soil. A good watering should be given, and the pots may be placed on a bed of ashes in a shallow pit from which frost can be excluded in the winter. Very little water will be necessary during the winter until growth is well advanced, after which a liberal supply must be given.

The Flower Garden.

Autumn-Flowering Chrysanthemums.—These should now be at their best, and ought to receive careful attention with regard to supporting the flower-stems against rough wind or heavy rain. If one good stick is placed in the middle of each clump, the flower-stems may be secured separately to the same support; and if dry weather prevails, a good supply of water will be necessary.

Spring Bedding Plants.—The stock of plants should be examined with regard to numbers, and if there is any doubt about this matter, more plants can be pricked out from the seed-beds, so that, when the time for planting arrives, there may be no scarcity of plants. The plants in nursery beds should have the soil stirred between them frequently, in order to promote clean, healthy growth.

The Rock Garden.—The most important work in connection with the rock garden now is the transplanting of young seedlings or plants raised from cuttings. Small pots may be used for tender subjects requiring the protection of a frame during the winter, but those which are quite hardy may be planted in their permanent quarters as soon as possible. Cut back overgrown plants and keep the surroundings quite free from weeds.

The Hardy Fruit Garden.

Gathering Fruit.—This work should be done while the fruits are quite dry, especially if they are to be placed in the store-room for home use. Great care should be exercised in picking each individual fruit, taking care that none of them is bruised before they are placed in the fruit-room. Later varieties of Apples and Pears must be allowed to remain on the trees as long as possible, especially if they are in a sheltered position.

Root-Pruning.—In the case of overgrown trees which are unproductive year after year, root-pruning may be commenced at once. A trench should be taken out to the depth of 4 feet and 6 feet from the stem, so that the soil may be carefully worked back. All strong roots which are growing in a downward direction should be cut, also those which are without fibres and running too far from the tree. When this has been accomplished, the space should be carefully filled in with suitable soil and the roots replaced in the same manner as if planting a young tree. In the case of young trees which are growing too freely, it is better to lift them entirely and replant them, keeping the roots as near the surface as possible.

The Kitchen Garden.

Winter Salad.—Every available pit should be filled with Lettuce or other salad plants with as little delay as possible. If seeds were sown in August, there ought to be plenty of strong plants ready now, and it is better practice to plant both Lettuce and Endive in the pits now than to wait until they are in an advanced state and then lift them, which may be after they are injured by frost.

Parsley.—The principal bed of Parsley should be cut close to the ground, in order to promote the growth of dwarf green leaves, which will stand through the winter better than plants which are left uncut.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Carrots.—The storing of Carrots must now claim attention, particularly those growing on cold or wet soils. Experience has shown that, although the tops appear perfectly fresh, yet in wet seasons the Carrots split badly if allowed to remain in the ground after this date. Not only so, but they become so coarse that they are only fit for feeding cattle. If lifted now they will keep perfectly fresh stored in pits with a little soil thrown on the top of each layer. Where wire-worm has been present, the ground should receive a good dressing of gas-lime, after which it may be allowed to lie on the surface for a time before digging it in.

Beet may also be lifted and stored any time after this date, and as this is the most tender of all root crops, the greatest care must be taken in doing so. The tops had better be twisted off with the hands, as there is great danger from bleeding if a knife is used, especially if cut too near the crown.

Seakale.—Continue to keep the ground clear of weeds and decayed leaves, and run the hoe among the rows to encourage the formation of the crowns. However carefully they have been dressed before planting, flowering shoots will appear, which must be cut out at once.

The Flower Garden.

Dianthus Napoleon III.—Although the majority of the charming and beautiful Dianthi are not difficult to grow, yet this variety often causes great heart-burning. This season, however, it has

bloomed well and given great satisfaction. The chief essentials to success are good drainage, a light, porous soil, and sufficient moisture during summer. Where cuttings can be procured, they should be inserted now in the alpine frame, where they will root freely, and whatever losses may take place during the winter, these cuttings will provide next season's supply.

Viola gracilis.—This fine Grecian variety, with its deep violet flowers and compact habit, cannot fail to arrest attention in any collection. Its proper place, perhaps, is in a shady corner of the rockery where it will get a plentiful supply of moisture. It may also be used as a groundwork for some of the moisture-loving subtropical plants. It is easily increased by divisions; but where the supply is limited, cuttings may be taken now, which should make nice plants by the spring.

Sweet Peas.—From an exhibition point of view, Sweet Peas cannot be said to have been quite up to the standard usually seen in the North. Whether this was due to the cold weather we experienced in the late spring and early summer I cannot say; at all events, they remained more or less stunted all the season. To avoid disappointment next spring, it will be advisable to harvest as many of the seed-pods as can be secured. This to the average grower is a very small matter indeed, and will not entail much time or labour. Growers in the South may have been more fortunate; but in these uncertain times it will be as well to take precautions.

Plants Under Glass.

Perpetual-Flowering Carnations.—Where these have been grown in cold frames during the summer months, they had better be moved to their flowering quarters. Not but what they can stand any amount of cold; it is the dampness that is to be avoided, as this is certain to encourage attacks of rust, besides weakening the growths. As a precaution against green fly, the house had better be fumigated. The most forward plants will now be pushing up their flower-spikes, and may be given some artificial feeding.

Nerines.—These fine autumn-flowering bulbs must now receive attention, and although their culture is of the easiest description, they are not always seen at their best. Perhaps the too free use of the water-pot is in a great measure responsible for this. Plants that have been stored should now be brought out and placed on a shelf in a cool house, and on no account must water be given until the flower-spikes appear. If water is given before this, the result will be an abundant crop of leaves and very few flowers. The plants must not be repotted very often; it is surprising how long they will thrive in small pots.

Mignonette.—Another sowing should now be made to provide a succession to those sown last month. Sow one or two seeds in small pots and place on a shelf in the greenhouse or in a cold frame. If specimens are desired, thin to one plant and pot on as required. It will be well to remember that all blooms must be nipped out as they appear until the plant has grown to the desired height.

The Hardy Fruit Garden.

Morello Cherries.—Now that most of the fruit will have been gathered, the trees should be gone over and all unnecessary growths removed to enable next year's fruiting wood to be better exposed to the weather. Any trees that have been infested with insects should be syringed with some solution.

Melons.—Plants that are now swelling their fruits often show a tendency to flag; but with care in watering and judicious ventilation this can, to a certain extent, be obviated. Syringing the plants might almost be dispensed with, but continue to damp the walls and paths.

Midseason Vines.—When the Grapes have been gathered, the shoots should be half-pruned to enable the basal buds to be fully developed. Should red spider have become troublesome, this is a favourable opportunity to get rid of it. Fumigation with potassium sulphide is, perhaps, the most effective fumigant for this purpose. Remove the surface-dressing and fallen leaves, which will undoubtedly contain all manner of insects. Water should be given to the border if required, but avoid over-watering.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE GARDEN.

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SEPTEMBER 26, 1914.

NOTES OF THE WEEK.

To Our Readers.—Since the outbreak of war there has been a natural tendency to economise wherever possible. The result of this economy has naturally been to inflict considerable hardship on many sections of the community, and few industries have felt the pinch worse than those connected with the supply of plants and seeds for our gardens. For this reason we make a direct appeal to all our readers who can possibly afford it to refrain from cutting down their seed, bulb or plant orders to the irreducible minimum. Every order placed now means work for a thoroughly deserving class of men who, unless business can be kept going as usual, will certainly be without the means of earning their daily bread. At this time of strife the quiet and natural beauty so characteristic of the gardens of this country should provide a welcome solace to those whose minds are distracted by stories and scenes of war. Already many who have been stricken in war are returning home, and surely there is no better place for convalescence than a well-ordered garden. While sympathising fully with those who feel it necessary to economise in many directions, we would remind them that the expenditure for plants, seeds or bulbs is not a very large item of expense. To curtail it seriously would be to interfere with the employment of many workmen in the large houses, and would also lessen the pleasure which returning soldiers might otherwise find in the garden.

White Heather in September.

One of the best forms of White Heather flowering in our gardens just now is a variety of the common kind, and named *Calluna vulgaris alba Serlei*. It makes a dense bush from 18 inches to 2 feet high, and branches freely, so that it is quite a useful and strong plant. Its pure white flowers are produced in abundance, so that there is plenty of material for cutting at this season. It needs the same treatment as that afforded the hardy Heaths, viz., well-drained soil, free from lime, and moderately rich in humus or decayed vegetable matter.

A Beautiful Michaelmas Daisy.—Among the earlier-flowering Starworts or Asters there are few more beautiful than the variety *Lil Fardell*. This belongs to the *Novæ-Angliæ* section, and is a useful plant for filling large beds or for creating

bright patches of colour in the autumn border. It attains a height of about five feet, the large flowers being freely produced in clusters on erect stems. The colour is bright glowing rose, and in their early stages each has a prominent yellow disc, which forms a pleasing contrast to the outer florets.

A Charming Chinese Shrub.—In *Sophora viciifolia*, a native of Western China, we have a particularly graceful hardy shrub, and one that is as yet unknown in many gardens. It was in 1897 when this shrub was first introduced to Kew, but since that time seeds have been sent home by several collectors, so that there must be a good stock of it in various nurseries. The



FLOWERING SHOOTS OF *SOPHORA VICIIFOLIA*, A HARDY SHRUB FROM WESTERN CHINA.

illustration gives a good idea of the shape of the leaves, which are about two inches long, and also of the flowers, which are bluish white, each having a decided blue calyx. This *Sophora* is perfectly hardy, but likes a sunny position and well-drained soil that is not too heavy. Apart from these details, it needs no special treatment.

National Sweet Pea Society's Trials of Novelties.—The National Sweet Pea Society has decided to hold its trials of novelties as usual next year. Those who wish to send seeds of novelties for trial should send thirty of each variety to the secretary, Mr. H. D. Tigwell, Greenford, Middlesex, to reach him not later than October 10th. A fee of 2s. 6d. must

accompany each variety sent for trial. The seeds must be in a plain sealed packet, and this packet enclosed in another larger envelope. This outer packet must bear the raiser's name, the name or number of the variety, and its colour description.

Rhododendrons for the Panama Pacific International Exposition.—Messrs. R. Gill and Son of Falmouth inform us that they have secured the order to supply the Rhododendrons required for planting the grounds of the above exposition, to be held at San Francisco in 1915. Some idea of the magnitude of the order may be gleaned from the fact that over seven thousand plants are ordered, among

them 100 of the well-known variety *Cornubia*, these plants being 6 feet high and 5 feet through. All the plants are well budded, and look well and give great promise, so they ought to make a fine display.

A Grey-Leaved Plant for Autumn Effect.—At this season, when most of the outdoor flowers have had their beauty spoiled by the cold winds and rain, the quiet beauty of the foliage of some is more fully appreciated. One of the best grey-leaved plants is the *Lavender Cotton*, a low-growing shrub that rejoices in the awesome botanical name of *Santolina Chamæcyparissus*. For creating bold splashes of soft colour in front of the shrub border, or in almost any other situation, it is excellent. It will thrive in the poorest soil, but to keep it compact it is advisable to cut it back to within a few inches of the soil each spring. Beyond that it calls for little attention.

A White Dahlia for Bedding.—Although Dahlias are not favourites with everyone, there is no gain-saying the fact that they are useful for creating bright effects in the garden during the waning days of summer and well into the autumn, until frost puts a stop to their display. One of the best white varieties for filling large beds, or spacious gaps in the herbaceous border, is *Kaiserin Augusta Victoria*, a fairly old Dahlia that deserves to be better known. It is far from being an exhibitonary variety, but its erect habit and freedom of flowering put it in the front rank of those suitable for the garden. It grows about five feet high, and its erect double blossoms, borne well above the foliage, are as good a white as one could desire.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

National Rose Society and the War.—In reference to the donation of 50 guineas made to Queen Alexandra's Relief Fund, and published in our last issue, the following letter has been received by Mr. C. E. Shea, president of the society: "I have to acknowledge the receipt of your letter of the 9th inst. forwarding for submission to Queen Alexandra an open letter to Her Majesty's address, together with a cheque for 50 guineas, a contribution from the National Rose Society towards Queen Alexandra's Relief Fund. Both letter and cheque, as requested, I submitted to the Queen, and I write now by Her Majesty's command to thank you, and through you the Council of the National Rose Society, very sincerely for the handsome donation voted by your Council to be placed at Queen Alexandra's disposal. You will see from the official receipt which I enclose

flower for sale. I have come across it three or four times in my travels, but it was only last spring that I had the good fortune to get some two dozen seedlings from a friend. These have given a good account of themselves, having well filled a moderately sized bed, the plants attaining a height of from 3 feet to 4 feet. (Nicholson gives its height as 2 feet.) The spikes have measured from 6 inches to 15 inches in length. It is not so deliciously fragrant as the common Mignonette (*Reseda odorata*), but it is more beautiful in form, its finely cut foliage adding to its effectiveness. Set well back in a border of annuals, it will hold its own against all comers. The question, however, will be, Where can I get it?—CALEDONIA.

Magnolia Watsonii in Scotland.—It may interest many readers of THE GARDEN to learn that this beautiful and highly fragrant Japanese Magnolia is flowering in my garden for the second time this year. The blooms are nearly as large as they were during the months of June and July.—DAVID R. WILLIAMSON.

here with me the cobweb characteristic is even more marked, being denser in character and more hoary looking, although the stronger contrast against the red rosette instead of a green one may partially, although not, I think, wholly, account for it. The hummocky nature of the growth is well shown in the photograph. It is growing on a dwarf pillar or pier that finishes off, with others of like character, a small piece of paved garden from the lawn. The photograph shows a somewhat later stage of growth than Mr. Malby's, as it is in full flower, although most of the flowers are outside the plate. The pier is hollow, and is built round solid loam, so the plant on top has plenty of root-room. It has only been planted two years, and is increasing rapidly. The pieces at the sides were, when planted, single rosettes. Where not fully exposed to the sun's rays, the spider web is only a dot in the centre, and does not cover the whole rosette, thus confirming Mr. Malby. One point I would like to raise. My plants of *S. arachnoideum* are quite green, and I have never noticed the red tinge he refers to as being so conspicuous in their native habitats. Is it possible that the *Sempervivum* he saw was the variety *Laggeri*, sometimes called *rubrum*? —HERBERT E. MOLYNEUX, Southampton.

The Pyracantha and Birds.—On page 411 of THE GARDEN for August 15 last was an interesting note on "The Pyracantha as a Flowering Shrub," in which the writer refers principally to its adaptability for cultivation in the open garden on account of its attractiveness over a lengthened period of the season, both of flowering and fruiting. As a wall plant I can fully endorse the lengthened period of its attraction, and particularly in a season like that now drawing to a close, which seems to have been specially favourable in this part of the country for Thorns in general, the roadside hedges being thickly covered with dense masses of red berries of the common Hawthorn, providing, one would think, sufficient food for any number of wild birds for some time to come; but they seem to have a distinct preference for the Pyracantha. A large part of the front of my house is covered with a plant of *Cratægus Pyracantha Lelandii*, which I planted when it was about two feet high in 1901. It is now about twenty feet or thirty feet high and several feet wide. It would have grown much higher, but it has been kept down from encroaching on the guttering which runs round the house. In the early summer the thick masses of white flowers almost entirely covered the foliage from a distance of about twelve feet from the ground to the very top, and these have been succeeded by an equally thick crop of the orange red berries, which are now becoming rapidly thinned by hosts of birds, who begin their depredations very early in the morning and continue all day; so that though the crop is a heavy one, the beauty of the plant will soon be a thing of the past. I tried netting the plant one summer, but the birds got so entangled in the net as to cause much damage to the plant. At the back of the house is a good-sized standard Hawthorn tree which also carries every year a good crop of berries, but though this has its share of feathered visitors they are not so numerous as they are to the *Cratægus*. This would appear to be due to the bright colour and the crowded bunches giving much less trouble than those of the Hawthorn.—JOHN R. JACKSON, South Devon.



A BEAUTIFUL COBWEB HOUSELEEK, SEMPERVIVUM LAGGERI, IN A HAMPSHIRE GARDEN.

that Queen Alexandra has sent the cheque for 50 guineas to the Soldiers' and Sailors' Families Association, an association of which Her Majesty is president, and is deeply interested in the great work it is doing.—D. M. PROBYN, General, Comptroller to H.M. Queen Alexandra."

Double-Flowered Peach Fruiting.—In 1911 I wrote to you about a double-flowering Peach tree fruiting, and you answered saying you were not aware it did fruit, and that if it produced a fruit again you would like to see one. I herewith enclose you one. The tree is growing as a standard in a south-west aspect, and sheltered by larger trees from the north-west. It has not fruited since 1911 till now.—G. DUELL, The Grange Gardens, Kew Road, Kew. [The fruit sent by our correspondent was of medium size, fairly well ripened and of moderate quality.—Ed.]

The White Mignonette (*Reseda alba*).—This Mignonette is classed as a biennial, but succeeds admirably treated as a half-hardy annual. I wonder how it is that, so far as I can see, none of our seedsmen offer seed of this attractive

Disease in Early Planted Potatoes.—In a district in Hampshire noted for high-class Potato culture (Magnum Bonum, Clarke's Maincrop Kidney and other varieties being raised in it) many early plantations have very badly diseased tops at the present time (first week in September), whereas the late-planted ones are in a healthy condition. Of course, this may be regarded as quite a natural result, but the contrast is too great, as the time lapsing between the two plantings does not correspond. The tubers are not affected so far. The tops commenced to shrivel up early in August, and have in many places quite disappeared from general view. The haulm of the early planted Potatoes was weak from the first, whereas that of the late planted ones was strong and remains so.—B.

Sempervivum Laggeri.—Your correspondent's note on the Cobweb Houseleek or *Sempervivum arachnoideum* in your issue of August 29 last, page 437, is interesting, and I enclose a photograph of another member of the same family identical in all its parts, except that the whole plant is reddish in colour instead of green, and

Sweet Peas Diseased.—I see in THE GARDEN of August 22 an answer to a correspondent who is designated "An Old Subscriber," to the effect that his Sweet Peas are badly attacked by Thielavia basicola. I am engaged in research on the parasitism of this fungus, and at the moment am badly in need of some Sweet Pea material showing this disease. I think it possible that "An Old Subscriber" or some other of your readers might be so good as to supply me with what I want, and I should be very grateful if they would send entire plants to me at this address. If possible, I would prefer the name of the variety attached to the plant.—MAURICE A. BAILEY, *The John Innes Horticultural Institution, Merton, Surrey.*

Bottling Fruit.—I was greatly astonished to read, in the otherwise excellent Fruit Bottling leaflet of the Royal Horticultural Society, a recommendation to use bullocks' bladder to cover the bottles. Long ago (before Father Time, like our Government, "withdrew the gold" from my curls and only gave me a sprinkling of silver in place thereof) I had gladly discarded the troublesome, expensive bladders for the far more convenient, cheap and cleanly vegetable parchment covers sold in packets of assorted sizes by every stationer. Besides, oh! Royal Horticultural Society, how can some twenty or thirty country housewives obtain bladders in villages where the local butcher has probably only one or two to sell in a week?—ANNE AMATEUR.

Lectures on Carnations.—I find I have several dates vacant for lectures on "The Perpetual-flowering Carnation" to horticultural societies during the coming winter, and wondered if you would care to make this fact known in THE GARDEN, as undoubtedly many secretaries of societies are anxious to secure lecturers. Of course, I do not make any charge, as it is my mission to emphasise the fact that the Perpetual-flowering Carnation is perfectly hardy and flowers well out of doors; that it is not necessary to have a heated greenhouse, as it flowers quite well in a cold one; also to point out that it is not a flower for multi-millionaires only, as anyone can make a good start with a 1s. 6d. packet of seed. This, I imagine, would help to broaden the sphere of this flower.—MONTAGU C. ALLWOOD, *Wivelsfield Nursery, Hayward's Heath.*

Sweet Pea History.—I have lately been reading Mr. Charles H. Curtis' interesting paper on "A Hundred Years of Progress with Sweet Peas," read at the Conference at Shepherd's Bush last July. In the course of it he says "yet if we are to believe Phillips ('Flora Historica'), the Sweet Pea was very popular in 1824. He wrote at that date: 'The Sweet Pea is so universally admired and so easily cultivated that we now meet with it in every garden, from the palace of the monarch to the cottage of the peasant.'" From the above wording it would appear that the author of the paper is a little dubious about the exactitude of Phillips' statement. It may be of interest to lovers of the flower to know that I have before me a catalogue of the celebrated Thomas Davey of King's Road, Chelsea, dated 1823-24, in which among the hardy annuals six varieties of Sweet Peas are offered for sale, viz., Black, Painted Lady, Purple, Scarlet, White, and Winged. As the Tangier Pea is included under the heading "Sweet Peas," "Winged" might possibly refer to something we would not recognise as a Sweet Pea to-day. Even if it does,

this still leaves us with five varieties, a number more than sufficient to substantiate Phillips' statement. On turning up the article in the "Flora Historica" I was a little surprised to find that the practice of sowing in small pots in the autumn and wintering the young plants in frames was not altogether the modern evolution of the grower for exhibition, but that it was evidently often practised in 1824, when Phillips wrote his well-known work: "When sown in pots . . . October is a good time for this sowing, and when they are removed to the house or placed under frames . . ." Is there anything new under the sun?—JOSEPH JACOB.

When to Plant Tulips.—I feel considerable diffidence in questioning the advice as to the planting of Tulips given by your contributor Mr. John Dunn in your issue of the 29th ult., but it is contrary to authorities and to my own experience. He tells us "The bulbs of late-flowering Tulips should be planted as soon as they can be obtained, for, although it is not usual to plant bedding varieties before October or November, Darwin and Cottage varieties will give better results if planted a month before that time." Surely he has put "the cart before the horse"! Bedding Tulips, which are generally accepted as early ones, should be planted before the Darwin and Cottage varieties, as the object is to get them into flower in April, so as to make room for summer bedding plants. There is no need for this with the Darwin and Cottage varieties. Several times I had my Darwin and Cottage varieties attacked by "fire" when planted in September, and on my asking advice of one of the principal exhibitors of these glorious flowers, he told me I planted far too early, and he advised me to remember that our ancestors never planted Cottage Tulips (and Darwins probably sprang from them) before Lord Mayor's Day (November 9). I have followed his instructions the last three years, with the result that my Darwins have been spared the devastating visitation of "fire." Furthermore, I believe the Tulips grown at Wisley for the nomenclature trial last spring were not planted till mid-November, and they were so great a success as to be deemed worthy of praise by the Dutch experts who examined them. Mr. William Robinson in "The English Flower Garden" makes the general statement that Tulips may be planted from October to the middle of November, and the Rev. J. Jacob says in his instructive and delightful book on Tulips: "I endeavour to get all my best bulbs in the ground between, say, October 20 and November 15. One year I planted up to the week before Christmas, and I never had a better show than in the succeeding spring," and in his Summary he further says, "Plant early in November." Will Mr. Dunn kindly give us his reasons for his advising early planting?—OBSERVER, *Weybridge.*

FORTHCOMING EVENTS.

September 29 and 30.—Royal Horticultural Society's Show of British-grown Fruits, 1 p.m. to 7 p.m. Lecture at 3 p.m. by Mr. E. A. Bunyard on "The Literature of Pomology." Royal Horticultural Hall, Vincent Square, Westminster.

October 6.—Royal Horticultural Society's Exhibition of Flowers, Plants, &c., 1 p.m. to 7 p.m. Lecture at 3 p.m. by Mr. James Hudson, V.M.H., on "The Art of Informal Gardening." Royal Horticultural Hall, Vincent Square, Westminster.

SOME FALLACIES ABOUT VEGETABLE GROWING.

SINCE the war broke out early in August, and Professor Keeble and the Rev. W. Wilks, on behalf of the Royal Horticultural Society, issued a leaflet urging Fellows and others to sow and plant as many vegetable crops as possible, a good deal of useless and, in some instances, misleading advice has been given publicity, particularly in the columns of provincial newspapers. While recognising fully the desirability of increasing and husbanding our food supplies to the fullest extent, we also recognise the danger of this advice, given evidently by persons who have had little or no experience of actual cultivation, or who have acted without giving due thought to the difficulties encountered by the inexperienced amateur.

The most misleading statements have been those relating to waste ground, by which it is evident that the writers had in mind odd plots of waste building land in the vicinity of towns. Now, in eight cases out of ten these plots have been derelict for years, the dumping-place of all the household rubbish that cannot be legitimately disposed of in the dustbin, and the home of Docks, Thistles, Nettles and other coarse-growing weeds that are too well known to need mentioning. Yet in August we were advised to dig up such waste ground and sow it with, among other kinds, such roots as Onions, Carrots and Beetroots. The experienced gardener knows only too well that to sow seed of such crops in land of this character is to at once court failure; hence the mischievousness of the advice. We are glad to see that the Board of Agriculture, in Special Leaflet No. 1, recognise this danger, and class land for special vegetable cultivation under three heads, viz., A, cultivated land; B, good grassland broken up for spade cultivation; C, derelict land; and give advice accordingly. This leaflet we hope to publish in an early issue.

We are perfectly well aware that derelict land, such as we have described, can be rendered suitable for some kinds of crops, such as Potatoes and coarse Greens, within a few months of breaking it up, but even then it needs considerable labour and exposure to the elements. Where such land exists and is available for cultivation, it should be broken up as soon as possible to a depth of 2 feet, keeping the lower foot in its original stratum and working into the whole depth any manure, vegetable refuse, such as leaves, grass and anything else that will quickly decay, burnt garden refuse or earth, but not coal-ashes; and by the coasts Seaweed may be utilised. All deep-rooting weeds, such as Docks and Nettles, must be removed and burned, as it is impossible to destroy them by burying.

Land of this description should not be sown or planted until the spring, in the meantime keeping the top spit forked over as frequently as possible during comparatively dry periods of the winter. Even in spring, owing to the fact that weeds from seeds are certain to be plentiful, only quick and strong-growing crops, such as Potatoes and Greens, ought to be put in. Onions, Carrots, Beetroots, Parsnips and similar crops would scarcely find the soil to their liking, and, even if they did, would soon be overrun with weeds, unless the cultivator could give them almost daily attention.

ROSE-GROWING IN TOWN GARDENS.

IN a dry period such as has been experienced on more than one occasion during the present summer, the question of watering the Roses always arises. It is not advisable to give frequent applications of cold tap-water, and turning the hose right on to the roots of the plants is likely to do harm rather than good. Excessive watering undoubtedly causes the spread of mildew and undermines the health of the plants. On the other hand, dryness at the roots will cause them to wilt and become defoliated, so that in a drought we must choose the lesser evil. The bad effects of the hose are mitigated if a sprinkler is used, which sends the water upwards, allowing it to fall upon the beds in small drops which have become warmed by contact with the air. Constant hoeing conserves the moisture as long as possible, but there are times when it becomes essential to water artificially. In heavy soils, which are, of course, more retentive, the necessity is not nearly so great; but where the staple is of a lighter nature, it should be seen that the beds are completely moistened at least once a fortnight. When watering is done, it must be carried out effectually, and at least three gallons should be given to each square yard. Merely wetting the surface is of no use whatever, as water applied in this way evaporates almost at once without benefit to the roots. In this respect it is well to remember that summer showers are often so light that they fail to penetrate sufficiently to do good, and therefore it becomes necessary on occasions to water after rain.

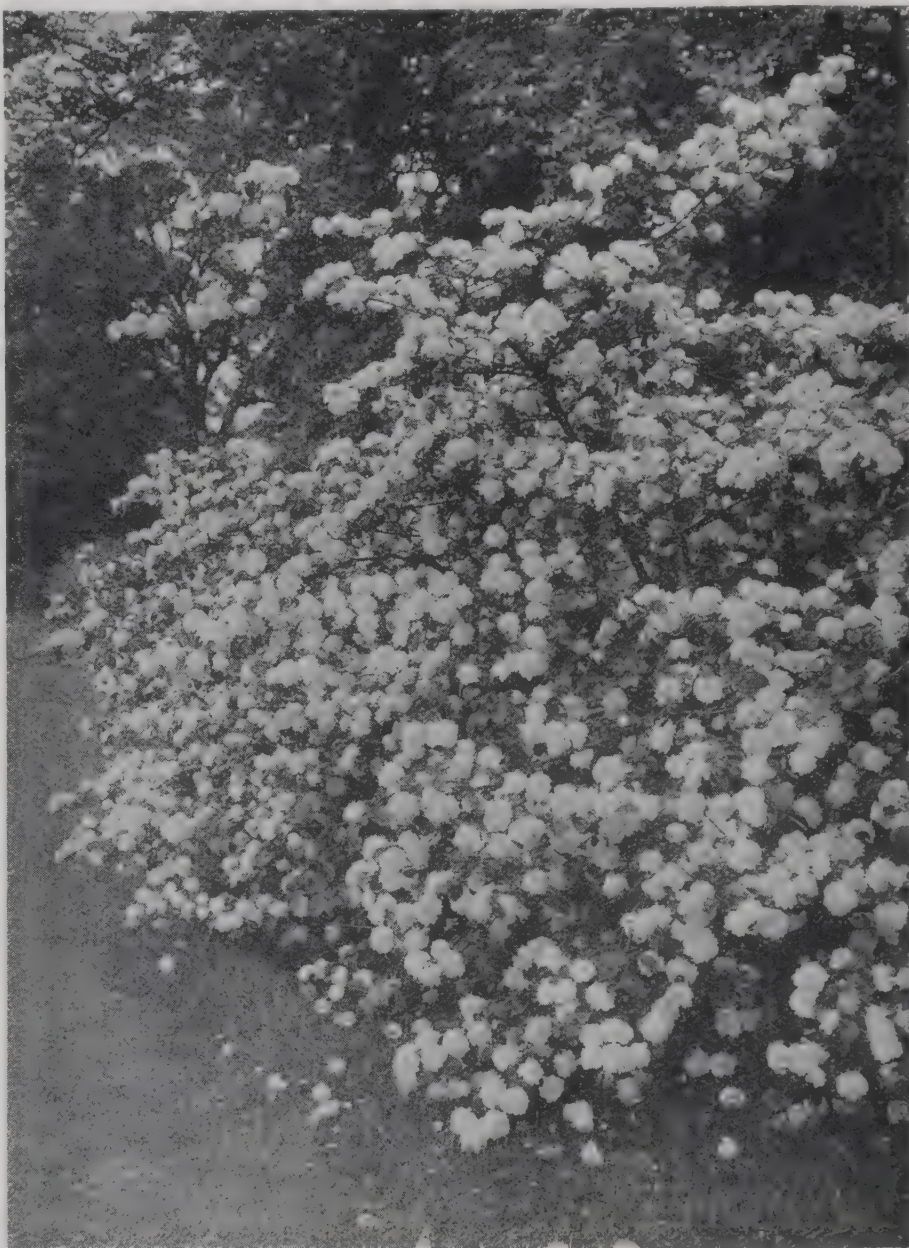
Now is the time we begin to appreciate those of our plants which the catalogues describe as "good in autumn." The advantages of the kinds which bloom continuously are so apparent in the small garden that, if their merits were more fully known, surely no others would be cultivated in towns except by exhibitors. Inasmuch as freedom of flowering is possibly the most important attribute to the majority of growers, it would be of real advantage if some easy method could be adopted of classifying the different varieties in accordance with the approximate number of crops of bloom which they may be expected to give. Perhaps in time the National Rose Society will add to its good work by giving a lead in this direction in its Official List, which no doubt nurserymen would be glad to transfer to their catalogues. P. L. GODDARD.

[In the 1914 list the Society does indicate, after the descriptions of a few varieties, that they are "good in autumn," but a special list of the best sorts for autumn effect would undoubtedly be useful. We will shortly publish an article on the best.—ED.]

GIANT ASPHODELS.

(Continued from page 465.)

Planting Season.—The best period for planting Eremuri is September and October, though it may be extended into November in the case of light soils. Given a choice, I should unhesitatingly prefer September. In planting, keep the crowns 4 inches to 6 inches below the soil, where they will be safe from frost and comparatively so from risk. Some have recommended keeping the crowns well above the ground at planting-time. This is a mistake. Had they studied the annual method of root production in these plants and the way the crowns of the giants of the tribe



A WELL-FLOWERED EXAMPLE OF THE JAPANESE SNOWBALL TREE, VIBURNUM PLICATUM.

incline to the surface naturally, they would not have done so. A point of importance in replanting is the brittleness of the roots, which break at the slightest touch. E. Bungei is one of the greatest sinners in this respect; hence much care is needed in dealing with it. In the transplanting of established garden clumps, a hole having a diameter of 3 feet or more, 6 inches deep, should be opened, so that the roots may take their natural lateral spread. For the first winter a protection of Bracken, short litter, or ashes and fibre should be given the crowns. In some soils slugs attack the crowns, but the danger of these may be reduced by placing boards, slates, or damp sacks with a little bran as a bait beneath. In this way they may be trapped in large numbers.

Propagation and Cultivation.—The most prolific source of increase is by means of seeds, which in a good season and with hand pollination are produced in abundance. Seeds are best sown within two months of harvesting and preferably in a cold frame, where they may remain for at least two seasons without disturbance. After this they may be transplanted to specially prepared beds for a further term of three years, when more room will be required. The seedlings should be transplanted almost with the maturing of their leaves. Such as E. Bungei divide naturally and easily; others, as E. robustus, with huge cone-like crowns, give offsets or split up more slowly. Apart from what has been said as to culture, the only item of importance is to see that the

plants do not suffer in the spring from extreme drought, should this occur. Instances have come to my notice where this has happened during the present year, the result being a partial blindness of the upper portion of the flower-spike. At such times all would be benefited by thorough watering and by occasional doses of liquid manure, particularly for the more robust-habited kinds.

Species and Varieties.—The former are native of Central and Southern Asia, but especially from Persia, Turkestan, the Himalayas, and even as far north as Siberia. The latter owe their origin to insect or wind agency and to the hybridist. Already the latter has been responsible for several fine additions, and doubtless the number of beautiful forms will be augmented in the near future. The flowering season is June and July, and doubtless this also will be extended as the work of cross-breeding goes on. The following are the principal kinds.

Eremurus Bungei.—Flowers clear citron yellow on spikes 4 feet to 8 feet high, depending on the strength of the crown. Pallidus and superbus are distinct varieties of this good and practically indispensable kind. June and July. Persia.

E. himalaicus.—The flowers are pure white, densely arranged on spikes that in the established examples reach to 8 feet high. A grand plant for grouping near dark-leaved evergreens. June. Himalaya.

E. him-rob.—A fine hybrid between E. himalaicus and E. robustus. The flowers are of the latter type and of a silvery rose. A really splendid plant.

E. Olgæ.—A July-flowering species from Turkestan. In habit the plant approximates to E. Bungei, the giant spikes of white red-tinted flowers rearing themselves to 8 feet high.

E. robustus.—This and E. r. elwesianus are the giants of the race, giants in stature and vigour above ground and below; hence they should be catered for accordingly. Their handsome spikes of rosy pink flowers may reach anything up to 10 feet or 11 feet high, when they are noble indeed. Of the magnificent effect of this type the illustration on page 465 of last week's issue from a photograph taken in Messrs. Wallace's Colchester Nurseries, will give an excellent idea. The habit of the plant is also well shown in the figure.

E. Shelford.—A glorious hybrid of tawny yellow and reddish bronze, the combination affording a unique picture in the sunlight.

E. Sir Michael.—A magnificent hybrid of the Shelford type, the predominating colour buff yellow. These are July-flowering, and the finest hybrids of the race.

E. Tubergenii is a hybrid between *E. Bungei* and *E. himalaicus*, intermediate between the parents in habit, and having tall spires of pale yellow flowers.

E. Warei.—A hybrid of splendid proportions and unique colouring. The flowers are reddish bronze, and provide a brilliant effect in the sunlight. It is one of the indispensables. E. H. JENKINS.

A HEDGE OF FRAGRANCE.

IN many gardens it is desirable to have a low, naturally grown hedge to form a well-defined boundary between two sections, and during late years many different kinds of shrubs have been utilised for this purpose. Where the soil is of a rather porous, and therefore warm character, there is nothing better than the common Rosemary, a shrub that is not nearly so slow growing as many suppose. Owing to its liability to injury from very severe frosts and cutting east and north-east winds, one would not recommend it for very cold localities or exposed positions, but there are hundreds of gardens where it might be planted as a hedge. If variety were needed, the common pink China or Monthly Rose could be mixed with it, in the proportion of about one Rose bush to every three of Rosemary. The grey under surface of the leaves of the latter blends delightfully with the colour of the Roses, and a hedge of this description would be interesting and pleasing at all seasons of the year. It ought not to be planted, however, where a close-clipped hedge is desired, as neither Roses nor Rosemary would submit to such restrictions for long. But both can be kept well within bounds by an annual or bi-annual shortening back with knife or secateurs of those shoots that encroach too far on the space desired for the pathway or for other plants. Rosemary bushes about one foot high can be purchased at a reasonable price, and may be planted in October, November or in February. To form a hedge they ought not to be set more than a foot or fifteen inches apart, and the soil should be well and deeply dug for their reception. Heavy manuring is neither necessary nor desirable. G. D.

NOTES ON VIBURNUMS.

THE Wayfaring Tree is in full bloom in May, and its umbel-like clusters of white flowers may be seen from afar. It is one of the most beautiful of our native shrubs, and grows freely in almost any soil, but especially on the hillsides overlying chalk. Not that it occurs in large stretches, for it is usual to see it scattered here and there on the outskirts of

the woodland or as a roadside shrub, for it is common in our hedgerows. To the botanist it is known as *Viburnum lantana*, but to country folk it will always be known as the Wayfaring Tree. Later on the flowers are followed by black, flattened fruits less than half an inch in length, and familiar objects of our hedgerows.

The Guelder Rose is companion to the Wayfaring Tree, but it is a few weeks later in coming into bloom. The white flowers are borne in globose heads, and for this reason it is often aptly called the Snowball Tree. But it has many other names, such as Dog Rowan Tree, Dog Elder, Marsh or Water Elder, and Cranberry Tree; while to the botanist it is *Viburnum Opulus*. The fruits are red and globose, also familiar objects of our countryside. In the garden Guelder Rose (*V. Opulus sterile*) nearly the whole head of bloom consists of sterile flowers. It is a very hand-

SOME GOOD AUTUMN-FLOWERING SHRUBS.

DURING the month of August many owners of gardens spend more time in them than at any other period of the year, yet too often the beauty of many of the plants has long since departed.

This is particularly noticeable among flowering shrubs, mainly owing to the fact that the majority, which are hardy, bloom during the early months of the year. Yet there is a goodly host which flower during August, and which might be planted much more extensively than they are at present. One of the most beautiful of these is *Buddleia variabilis*, introduced from China some twelve or fifteen years ago. Several varieties of it are obtainable, *veitchiana* being one of the best.



A BED OF THE AUSTRALIAN DAISY BUSH, *OLEARIA HAASTII*. THIS IS A GOOD AUTUMN-FLOWERING SHRUB.

some shrub, with perfect balls of snow white flowers.

The Japanese Snowball Tree (*V. plicatum*) shown in the illustration on the opposite page has clusters of white flowers resembling those of the Guelder Rose. May is its month for flowering, and there are now many gardens all the more beautiful owing to its presence. It is easily one of the six most beautiful shrubs for English gardens.

Notes on *Viburnums* would be incomplete without some reference to *Laurustinus* (*V. Tinus*), the fragrant evergreen which flowers from December onwards and may be seen in almost every garden in the country. All of the *Viburnums* referred to are quite hardy and of the easiest culture. They may be increased by layering the basal shoots, preferably in autumn, and from summer cuttings, while they thrive in almost any soil. All, except the *Laurustinus*, can be successfully planted in autumn or early spring; the *Laurustinus* in March. C. O.

It has long, semi-pendulous spikes of lilac-coloured flowers that are much beloved by the bees. The Tamarisks are a fairly large family, but the best is *Tamarix pentandra*, known to most nurserymen as *æstivalis* or *Pallasii rosea*. It has pale green feathery shoots, each of which forms a large, nodding, plume-like head of rose pink flowers. Of *Ceanothuses* we must not omit *Gloire de Versailles* (bright Cambridge blue) and *Ceres* (pale rose lilac). If cut down severely each winter, they make compact bushes about two feet high. In *Spiræas* *lindleyana* and *Aitchisonii* we have two tall shrubs with much-divided foliage and large plumes of creamy white flowers; while of dwarf kinds room must be made for *japonica* Anthony Waterer, crimson; *j. Bumalda*, rose pink; and *j. alba*. These, if pruned nearly to the ground each winter, make neat tufts of flowers not more than 18 inches high, and are excellent for lawn beds or the front of the shrubbery. The double-flowered pink Bramble or *Rubus*

is excellent for an open spot in the woodland, especially if allowed to ramble over some old tree stumps. The double white one is not so good. Although not strictly a shrub, the Californian Tree Poppy, *Romneya Coulteri*, is often classed as such, and is well worth giving the warm spot that is necessary to its well-being. At Kew, Aldenham House and a few other places they have a newer species, named *trichocalyx*. It has large, Poppy-like, silky white flowers, similar to those of *Coulteri*, but produces them more freely and makes a better bush. *Hydrangea arborescens grandiflora* is a good and perfectly hardy shrub with large heads of creamy white flowers, and *Hypericum Henryi* is a St. John's Wort 3 feet or more high, which in August is covered with large golden blossoms. It will thrive equally well in sun or shade. The Spanish Broom, *Spartium junceum*, with its green, Rush-like stems covered with brilliant yellow flowers, must not be omitted; it does well in poor soil. A good companion to it is the Mount Etna Broom, *Cytisus ætnensis*, which grows quickly and makes a small, pendulous tree, covered in August with bright yellow flowers. A fine Clematis of shrubby habit that comes from the Caucasus is *C. pseudo-Flammula*. It makes quite a thick bush, nearly six feet high, and in August is covered with large trusses of small, creamy white flowers which are very fragrant. *Olearia Haastii*, with small white flowers, is a slow-growing evergreen, and ought to be planted in a bed or to the front of the shrubbery. Those who appreciate uncommon shrubs should plant *Castanopsis chrysophylla*. It has medium-sized evergreen leaves, similar to those of the Evergreen Oak, and has small feathery tufts of creamy yellow flowers in August. The fruit that results from these does not mature until the following year, when it has a spiny coat similar to that of the Horse Chestnut. This *Castanopsis* makes a symmetrical shrub some 10 feet or more high, and is attractive as an evergreen. Another little-known shrub that flowers at this season is *Eucryphia pinnatifolia*, native of Chili, but, nevertheless, a hardy subject.

Now that the planting season is approaching, those who appreciate flowers in autumn should remember these shrubs. Most of those named are easily cultivated, but the Brooms should be obtained as small plants in pots, otherwise they suffer seriously in transplanting. In common with all other kinds of vegetation, shrubs appreciate well-cultivated soil, and this is work that will be particularly suitable during the coming weeks. Where possible, the land intended for shrubs should be broken up to a depth of 2 feet, and, if poor, some well-decayed manure thoroughly mixed with the whole.

H

EARLY FLOWERING CHRYSANTHEMUMS FOR BEDDING.

IT is now about twenty years since the early flowering outdoor Chrysanthemums began to show such marked superiority over those raised in earlier days, and during the past two decades they have enjoyed a triumphal progress in popular esteem. In the earlier days we were almost entirely dependent on Continental introductions, and no one did more to improve this hardier race of plants

a constitution that came through the severest winter with little or no harm to plants left outdoors throughout the whole of that season.

Plants of this kind were, therefore, considered to be ideal for the outdoor garden, and I question whether there is any better type of plant in cultivation to-day. Mme. Marie Massé and its sports are plants that do not take kindly to disbudding. They never look better than when grown in a natural manner, without disbudding. As a result of the introduction of this fine sort, growers in this country quickly found out how easy it was to save seed of this variety and its sports; and as pollen was so easily obtainable, British growers

made many crosses, and for some years afterwards it was an easy matter to trace the parentage of the newer introductions back to the excellent family to which reference has been made.

In later years English growers have largely superseded our Continental rivals as raisers of the outdoor Chrysanthemum, and many very beautiful sorts have been distributed that are highly prized to-day. The long run of British successes has been broken in a measure by M. Nonin, who has succeeded in introducing to this country a number of very charming sorts that are a complete break away from any of those raised by others. For a year or two this French raiser has added to our already long list sorts that are now in commerce and much valued by growers generally. A noteworthy example of this raiser's skill that I saw last year was a large bed planted with a beautiful soft pink variety named *Normandie*. It is a delightful acquisition. When it was first distributed I remember seeing a beautiful series of plants in a Midland garden, and I was so impressed with its beauty that I obtained permission to take back a bunch of flowers to London, where it was submitted to the judgment of the floral committee of the National Chrysanthemum Society, which body awarded a first-class certificate quite unanimously.

For creating bold masses of colour in the garden during the autumn months there is no other subject that possesses

such a wealth of glorious colours as the early flowering outdoor Chrysanthemum. The colours are so rich and varied, and the warmer tones now so largely preponderate, that the old charge made by prejudiced individuals that this was a dull and dowdy subject, chiefly represented by magenta and kindred tones of colour, no longer holds good. Bright and cheering in the dull days, they are indeed glorious in the light of the autumn sun, and the landscape lit up with bold masses of this subject is well worth studying to achieve. For smaller gardens, especially those of amateurs in the suburbs of the metropolis and large towns, they are invaluable, for, as soon as the glory of the summer garden

than the late M. Simon Delaux, who sent to this country a large number of very beautiful sorts. With the advent of Mme. Marie Massé in 1894 the character of these plants was vastly improved, for not only did this variety embody all that was needed in an outdoor Chrysanthemum, but in the years immediately subsequent to its introduction quite a number of sports in many diverse tones of colour were fixed and later distributed, so that in a comparatively short time there was available for enthusiastic growers of these plants quite a large number of sorts of various colours. The value of this variety and its sports was apparent to all, for not only were the plants extremely bushy and free-flowering, but they possessed



EARLY FLOWERING CHRYSANTHEMUMS IN A SMALL GARDEN.

has departed, the early flowering Chrysanthemums are ready to continue the floriferous display.

Either large or small beds of one variety make a very pretty floral picture, and planted in groups or masses of various sizes at intervals in the hardy border they are most attractive. Individual plants of the more bushy kinds here and there in the outdoor border is a method of planting that has much to commend it, but due regard for the respective colours in association should always be respected. One of the finest beds of early flowering Chrysanthemums I have seen was a combination of the free-flowering Japanese kinds, with a few plants of severely disbudded varieties interspersed here and there as a contrast. The edging to this large bed was composed of

THE JAPANESE WIND- FLOWERS.

IN the waning days of autumn, when the morning and evening mists have enshrouded the flowers of the outdoor garden and, in too many instances, marred their beauty, we appreciate those that come out of the ordeal unscathed. Among the most beautiful of these are the Japanese Windflowers or Anemones, tall yet graceful flowers, quite unlike the dainty little native species that bespangles the greensward of our coppices in the gusty days of spring. These Japanese Anemones, by their very stature and bearing, are admirably adapted

picture of sublime beauty with these and autumn foliage.

Fortunately, the cultivation of the Japanese Anemones does not present any great difficulties. What they do appreciate is deeply cultivated and well-manured soil, and that with a good proportion of clay in it. One is often asked to name plants that will thrive in clay soil, and the Japanese Windflower is one of the best. As the roots are long and thick, with but few fibres, transplanting is not advisable more often than is absolutely necessary; indeed, a good rule to follow is to disturb the plants as little as possible. In forming new beds or groups in borders, the planting may be done in late autumn or early spring, and



A BEAUTIFUL EFFECT CREATED BY PLANTING JAPANESE ANEMONES BY THE WATER-SIDE.

some of the dwarf-growing, miniature-flowered Pompon sorts.

The outdoor Chrysanthemums succeed better when planted in not over-rich soil. A too generous application of manure to quarters intended for these plants invariably promotes growth of a too luxuriant kind, which results in the plants making unduly tall growth and delay in the period of flowering. Plants should be well hardened off preparatory to planting outdoors, and the planting should be done during the first three weeks in May, varying the date of planting according to the position, exposed or otherwise. In a later contribution I shall be pleased to give selections for various purposes.

Highgate, N.

D. B. CRANE.

for grouping in the herbaceous border, in large lawn beds, the edges of shrubberies, or by the side of a pond or lake. They are never seen to better advantage, particularly the varieties with white blossoms, than when massed, as in the accompanying illustration, with a background of dark green foliaged trees, these serving to accentuate the glistening purity of the daintily poised blossoms. When to the trees water is added, in which the flowers are reflected with a shimmer of light and shade, we begin to realise how indispensable these hardy plants are in the garden at this season. Nor must we overlook their usefulness for cutting. It is almost impossible to arrange them inartistically, their long stems and light, graceful flowers enabling the veriest tyro to create a

pieces of root with as many fibres as possible should be given preference to those of a less fibrous character.

Contrary to a widespread belief, the original species has rose-coloured flowers with large, bold foliage, and a very useful plant it is. A variety named Honorine Joubert has pure white flowers and is still one of the best for general purposes. Others with white blossoms are Whirlwind, very large and semi-double; and sylvestris, smaller and earlier, with dwarfer habit. A larger form of this is known as grandiflora. There are several beautiful varieties with pink or rose coloured flowers, notably Queen Charlotte, very large, rosea, semi-double; Autumn Queen, crispifolia elegans and Lady Ardilaun.

TROJAN

GARDENING FOR BEGINNERS.

A USEFUL FRUIT GATHERER.

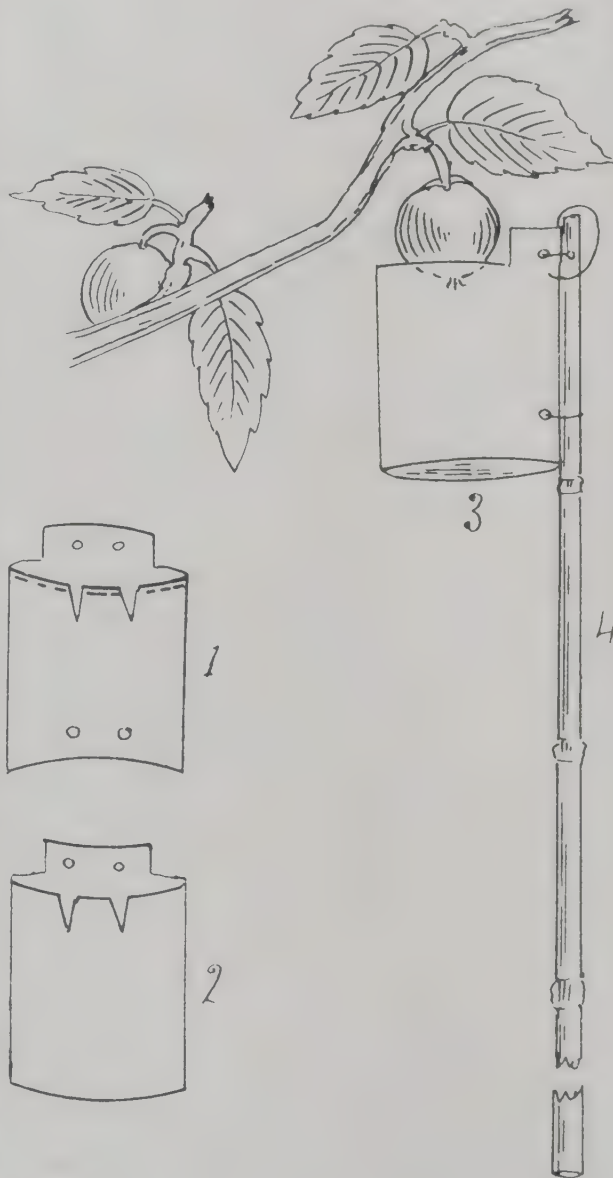
NOW that Apples and Pears are being gathered for storing during the winter, I think perhaps the following particulars of a home-made gatherer may be useful. Too often one finds those fruits that are unreachable left on the tree to spoil, or else knocked or shaken down and so ruined for keeping purposes. To gather fruit which is not reachable from the ground or by ladder, use a tin tied to a stick. For the stick get a stout Bamboo rod from 3 feet to 13 feet in length. Bore or burn a hole through the rod at or near the top. Punch some holes in the side of the can. Fill the can with wood and then holes can be made with a fair-sized French wire nail. Cut out several V's at the top of the can and turn down the edge of the can inside two-thirds of the way round. The spaces where the V's are catch and cut through the stalks of the fruit. Tie the can to the Bamboo rod so firmly that when the rod is twisted round, the tin goes with it. Place a little hay at the bottom of the tin. With a little care all the fruit can be gathered off a tree without any bruising whatever. I find the most effective tin is that which has contained "Frame Food," 3s. 9d. size. Its dimensions are: Height, top to bottom, 8 inches; width, side to side, 6 inches; depth, front to back, nearly 4 inches. A. W. W. P.

TAKING TENDER PLANTS UNDER GLASS.

WHERE glass accommodation is limited—and in the majority of small gardens it consists of but a single greenhouse—the question of the wintering of tender subjects is an important item at this season of the year. In order to provide room for the development of different plants which occupy only a small space in the winter, but a much larger space when they commence to grow, all the occupants of the greenhouse that can be so treated are stood outside during the summer months. With the approach of autumn and the possibility of frosts that may do them some damage, arrangements must be made to remove under cover the different plants it is intended to keep. When this is done, the greenhouse is sure to be filled to its utmost capacity; hence it should, if possible, be thoroughly cleaned while there is still room to move the plants about.

The house being thus put in order and any subjects that are not considered worth keeping being dispensed with, all is ready for a change in the weather, which may come on suddenly. It is not advisable to wait too long for this, as it is much better to take the plants under cover in a quiet manner than to rush them in when severe frost threatens. Plants that have been stood out of doors for some time should each be carefully examined for slugs or any other pests which are apt to collect on the bottoms of the pots and in any place that they can find shelter. When any that are found have been destroyed, the surface of the soil may be cleaned over with a label or thin piece of wood, and the pots thoroughly washed. If stood on a clean surface where they will not be splashed by heavy rains, all will be ready to take them into the greenhouse at short notice.

In doing this, though every inch of space may be a consideration, yet it is a mistaken policy to pack the plants too closely together, for under these conditions many will lose their leaves and be practically spoilt. A certain amount of forethought must be brought to bear on this, for some subjects, such as Fuchsias, which lose their leaves, and Lantanas, which also go partially to rest, may be stood so that the pots touch one another, whereas Indian Azaleas and other plants that are



A SIMPLE, HOME-MADE FRUIT GATHERER.
1, Back of tin; 2, front of tin; 3, tin tied tightly to Bamboo cane (No. 4).

strictly evergreen in character must have space for the air to circulate, otherwise they will quickly suffer.

Another point worthy of consideration is that insect pests, such as aphides or green fly and thrips, are apt to make considerable headway on plants out of doors towards the end of the summer, so that a very good plan is to fumigate or vaporise the house as soon as the plants are safely gathered therein.

It is quite possible that after a frost or two the weather may change, in which case it should be borne in mind that, the plants having been exposed to the outside air for so long, a close and stuffy atmosphere will cause many of the leaves to drop. Such being the case, plenty of air should be given on the greenhouse, not only during the day, but also at night when there is no risk of

frost. With this treatment the tissues of the plants are hardened, and they are better able to resist a long and trying frost during the winter.

The watering of the different plants from now onwards should, if possible, be done in the morning instead of the evening, which is the most suitable time during the summer months. At that period, if watering is done in the evening, it allows ample time for the roots to absorb the moisture, while during late autumn and winter it leads to a saturated atmosphere at night, which is detrimental to the health of the plants. During the summer, therefore, the best time to water is, naturally, in the evening.

Apart from the different plants which are established in pots, the greenhouse is often employed for the wintering of the summer bedding plants. Cuttings of Pelargoniums, Marguerites, Lantanas, Heliotrope, Fuchsias, &c., should be rooted before this, and all they require is a good light position in the greenhouse. On the other hand, any old plants that have done duty during the summer should be lifted, any straggling roots shortened back, and the tops treated in a similar manner. They must then be put into pots as small as the roots can be conveniently placed, as they winter better in comparatively small pots than in very large ones. While they need to be moderately watered till the roots take possession of the new soil, which will be soon, less water will be required in the winter. The removal of decaying leaves is a very important item, especially during the autumn and winter, as at those seasons the decay soon spreads to even healthy foliage, while in the summer it detracts greatly from the appearance of the greenhouse. H. P.

BEDDING-OUT PLANTS AND CUTTINGS.

EVEN where every convenience for the lifted plants and cuttings exists, there is a great deal of skill required in order to preserve them from injury during the winter months. Much more skill is needed where such conveniences do not exist.

The Cuttings.—The best rooted specimens do not possess many roots at the end of September, and those that are badly rooted then do not produce many more roots before the early part of the following spring. Now, it is obvious that such cuttings, especially if they are of a succulent nature, must be carefully treated as regards watering and ventilation. There is no better position for them than on a shelf in a greenhouse. Thorough drainage is ensured, and air can circulate among the pots, boxes and foliage very freely. Before placing the cuttings in their winter quarters, carefully examine them, and arrange those well rooted together and those indifferently rooted together, respectively. Then the cultivator can give water with more advantage and benefit to the cuttings than if all were mixed.

Lifted Plants.—Thousands of old plants are lifted and potted from the beds. These should not be potted in a large quantity of soil for wintering successfully. If there is enough in each pot to keep the plant steady, it will suffice. Many leaves will shrivel, but young ones will take their place next spring.

AVON.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Late Grapes are now colouring fast, and great care should be exercised with regard to ventilation and watering. Air may be freely admitted during the day while the weather is favourable, and the ventilators should be left slightly open at night, so that by the aid of a little fire-heat a light, buoyant atmosphere may be maintained.

Strawberry Plants for Early Forcing.—The pots are now filled with healthy roots, and will require some stimulant to keep them from becoming stunted. Manure-water from the farmyard answers the purpose well, but must always be applied in a weak state. Syringe the foliage daily, and if mildew makes its appearance, means must be adopted at once to clear the plants of this troublesome pest.

Plants Under Glass.

Begonia Gloire de Lorraine.—The earliest plants will now be well advanced, and should not be subjected to more than an intermediate temperature, or the constitution of the plants will suffer in consequence. A number of neat sticks should be placed in each pot and the shoots secured as it becomes necessary. A little stimulant may now be provided to keep the plants growing freely, and for this purpose Clay's Fertilizer will be found a safe manure, providing it is applied in moderation. Soot may also be applied with good results.

Roses in Pots.—The stock of pot Roses should now be examined and preparation made for potting. September is the best month for this purpose, as, after potting, the plants will produce a number of fresh roots before the foliage drops. The soil may consist of good turfy loam, with a small quantity of decayed cow-manure and sufficient rough sand to keep the compost open. Fine lime rubble may also be applied if the soil is heavy.

Chrysanthemums.—The most forward of the large-flowering kinds must be placed under cover as soon as the buds begin to show colour. A well-ventilated structure should be chosen for this purpose, and the buds must not be too far from the glass. In cases where the buds are too early, a north house may be the best place for them, but they must never be deprived of light. Stimulants of some kind should be carefully applied, but never of sufficient strength to injure the young roots.

Schizanthuses.—The plants intended for early spring flowering should be ready for potting into 4-inch pots. The soil may consist of good turfy loam and leaf-soil in equal parts, with sufficient sharp sand to keep it from becoming sour. A clean cold frame is the most suitable place for them during the autumn, but they must be removed to a well-ventilated greenhouse before the winter, and should be grown quite close to the roof glass in order to keep them stocky.

The Flower Garden.

Antirrhinums.—If good, stocky plants are required to put out in April, the present is a suitable time to sow the seeds. Sow thinly in boxes or pans, and prick out the seedlings as soon as large enough. Shallow boxes may be used for the purpose, and the plants should be allowed the protection of a cold frame in the winter. Cuttings may also be inserted now with a view to increasing any particular variety.

The Propagation of Violas, *Calceolarias*, *Veronica Andersonii* variegata and *Pentstemons* should be accomplished as soon as possible. The soil may consist of loam and leaf-soil in equal parts, with a good quantity of sand, and should be placed within 15 inches of the roof glass in a cold pit. Lavender and Rosemary cuttings may also be inserted now. The cuttings ought to be removed from the parent plant with a good heel, and made perfectly firm in sandy soil. By the month of April the plants should be ready to put out.

The Hardy Fruit Garden.

Strawberries.—No time should be lost in making the necessary new plantations of Strawberries.

This work may have been delayed in consequence of dry weather, but should now be pushed forward so that the plants may become established before the winter. If the ground has been prepared, the plants may be put out in rows 2½ feet apart, but careful watering will be necessary before their removal from the pots, and frequent applications of clear water should be applied after they are placed in position, for if once the small ball of soil is allowed to become dry, the plants may just as well be destroyed.

The Kitchen Garden.

Spinach.—The soil between the rows of Winter Spinach must be frequently hoed, and if the plants are too numerous, they may be thinned to 4 inches apart, as they will stand the winter better than if left unthinned. Frequent light dustings of soot may be applied with advantage during showery weather.

Lettuce.—Late-planted Lettuce can be treated in the same way, but at least 9 inches should be allowed from plant to plant in the rows. A sowing of Brown Cos, Hardy White Cos and Maximum may be made on a sheltered border for planting out in spring, and to make quite certain, another sowing should be made early in October in a cold frame.

Leeks.—These plants are gross feeders, and ought to receive frequent waterings of liquid manure from the farmyard. The soil ought afterwards to be deeply hoed, in order to kill small weeds and promote quick growth.

Autumn-Sown Onions.—As soon as the young plants are well through the ground, the Dutch hoe should be frequently used among them. Keep the rows quite free from weeds, and do all that is possible to promote clean, stocky growth.

Potatoes.—As soon as the tubers are sufficiently ripe for lifting, this work should be taken in hand, as, if left in the ground too long, some of the best tubers are almost sure to become affected by disease.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Late Peas.—Every encouragement should be given to the late Peas to fill the pods. If weeds have been allowed to grow among the plants, these must be cleared away, and if the growths appear too numerous, it would be advisable to thin these out, if it can be done without injury to the others. The Peas can be used when quite small, so that no pods should be thrown away because they do not appear to be well filled.

French Beans.—The same remarks apply to these Beans, particularly plants grown in frames. Pinch any that are becoming too tall, and do not hesitate to draw out a plant where they appear to be crowded; indeed, every care should be taken to prolong the season of supply.

Celery.—The main crop will now require earthing again, and it is more than ever necessary that this work should be performed when the soil is tolerably dry. Should the soil be of a heavy nature, it must be powdered down as fine as possible, and, as in former earthings, the greatest care must be taken not to allow the soil to reach the centre of the plant. In the North there is not much likelihood of a shortage of moisture at this season; still, if there is any chance of the roots being dry, give them a good soaking.

The Flower Garden.

Wall Climbers.—In the majority of cases these will now have completed their growth, and if time permits they should have the old wood cut out. This work must be very carefully done, otherwise much damage will result from tearing off the foliage of the young growths. Next season's flowering shoots should be loosely tied up, so that they may be thoroughly matured before severe weather sets in.

Planting Violets.—If the frames were prepared as already advised, the planting should be proceeded with at once. On the whole the season has been

favourable to their growth, and with care in lifting everything points to having a good display. In a great many cases it is indifferent lifting that accounts for the number of failures recorded. If possible, choose a showery day for the work, and keep the ball of soil round the roots perfectly intact. When the work is finished, the foliage should just be clear of the glass. Give the plants a good soaking of water to settle the soil about the roots, and if the weather is bright, shade for a few days afterwards, giving them abundance of air.

Dahlias.—These will now be giving a grand display, and, like all other robust-growing border plants, will in many cases require additional supports. Indeed, with a little extra attention in this way, these plants should give a fine display for some time yet.

Rose Cuttings.—It is always advisable to have a good stock of young climbing Roses, particularly of the *Hiawatha* and *Lady Gay* type, and as the majority of these root freely from cuttings, a good batch should now be secured. These will be found extremely useful for filling up blanks on the arches and pergolas, and clothing some old tree stumps. Select young, well-ripened shoots with a heel of the old wood. Plant them in nursery lines in ordinary garden soil which has been previously made moderately firm.

The Rock Garden.—This will now need careful attention, removing weeds and all decayed foliage. Besides ordinary rock plants, there are numerous bulbs that may be planted now, and in doing so endeavour to plant in fairly large groups, which will enhance the spring effect. Such bulbs as *Chionodoxas*, *Scillas*, *Muscari* and quite a number of the *Anemones* will now be at hand, and should be planted at once.

Plants Under Glass.

Ferns.—Where *Adiantums* and other stove Ferns are required for furnishing in the autumn, a number of the plants should be removed to a cool and airy house, where they can be gradually hardened off. The remaining plants will be greatly benefited by a little more room.

Early Flowering Tulips.—To have a supply of these for Christmas, no time should be lost in potting up the bulbs. Do not attempt to force them until they have made 2 inches or 3 inches of growth and the roots appear at the bottom of the pots.

The Hardy Fruit Garden.

Apples.—Preparations should be made for the gathering and storing of the earlier varieties of Apples, and this must not be done indiscriminately. Very often blackbirds will give warning that a certain variety is ripe by their too close attention to them, and if the fruits are not secured in time the birds will account for a good many of the best fruits. There is perhaps no better place in which to store Apples than an old thatched building with earthen floors, where the temperature fluctuates very little.

Pears.—The gathering and storing of Pears must be done very carefully, and where there is no danger of them being blown down by the wind, they should be allowed to hang as long as possible. In storing, it will be as well to grade the fruits, and all small and imperfect fruits may be stored together for culinary purposes. It will be necessary to look over them every day, as, no matter how carefully they have been gathered, some are sure to get bruised, and this sets up decay with remarkable rapidity.

Fruit Under Glass.

Orchard-House.—Any trees which require repotting should be seen to at once or, in the case of late-fruiting sorts, some time before the foliage begins to fall. But whether the trees require repotting or not, the drainage in each case must be carefully examined.

Cucumbers.—To ensure a supply during the winter months, a sowing should be made now. This batch had better be grown in large pots, where they will be more under control. Careful watering is essential, as these late-growing plants are very subject to mildew.

JOHN HIGHTATE

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

GARDEN FRITILLARIES.

(Continued from page 466.)

Fritillaria latifolia, however, from the Caucasus, is not a difficult plant, and the Dutch florists have raised a large number of fine varieties from it with flowers varying from purple to lilac. They are larger, darker and more fleshy than those of *F. Meleagris*, which they otherwise much resemble. I do not think they are difficult at all, once established, and the few bulbs I have flower regularly enough year by year; but they seem impatient of being moved and so often cause disappointment that I have discarded them from my lists in favour of the forms of our common Fritillary.

F. recurva and American species.—I have left till last the section that indisputably includes the most fascinating and beautiful species. I mean the wonderful American Fritillaries, of which *recurva* and *coccinea* are always so much admired whenever they are shown. But I have been speaking of Fritillaries that we can treat as good hardy perennials in our gardens, and in my own experience most of the American sorts do not come under that heading. Purdy divides them into two sections—one, low-growing plants with leaves clustered about the base and several widely bell-shaped flowers, and the other, taller plants with leafy stems, the leaves in whorls and the flowers bell-shaped in long racemes. The former are the "Mission Bells" of the South Californians, and they are found in sticky black clays which are often very wet in winter. Liliacea, biflora and pluriflora are in cultivation, and if they are less beautiful than the representatives of the next section, they are certainly easier to keep. These others are mainly woodland plants, and their best representatives are the scarlet *recurva* and *coccinea* and the rich yellow *pudica*. I do not think I can add anything useful to what has already been said by others about their culture. In well-drained soil or in pots or pans they are very easily flowered from good bulbs, and the best advice I can give is: Buy the largest bulbs you can each season, pot them up, and enjoy their beauties in the shelter of an alpine-house or cold frame. They are much more beautiful than many annuals with which so much trouble is taken. Purdy warns us that they are not likely to make good perennial plants, for in their own homes they never flower two years running, he says. A new bulb is formed each season on top of the old, and fresh bulbs develop from the rice-like grains round the sides of the old bulb; but energy has to be accumulated for two or more seasons before the prized flower-spikes can be thrust up.

With all the Fritillaries early planting is desirable. Deterioration soon sets in if the bulbs are left long out of the ground. And, at least with the Asia Minor species and those that stand sunshine, it is desirable to have a good percentage of lime in the soil. During active growth all should have ample supplies of water at the roots, and it is for this reason, I think, rather than for the desirability of shade in itself, that so many will do well in a north border in lighter soils which do equally well under a south wall in a more retentive loam.

R. W. WALLACE.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All

reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

TREES AND SHRUBS.

ARBORICULTURE IN GARDENS (H. D. Green-Armistage).—The trees mentioned are usually raised from seeds, excepting Filberts. These are generally raised from suckers. Seedling Walnuts are a long time coming into bearing. It is much better to purchase grafted trees. They come into bearing much sooner and the fruit is more satisfactory. In the case of a grafted tree, there is very little pruning required after it has begun bearing. The Chestnut, as a rule, requires but little pruning, but is quite amenable to the process when this is necessary for the regulation of branches.

PRUNING CEANOTHUS (W. B.).—Your plant of *Ceanothus* growing against a wall should be pruned in February. Cut this year's wood back to within two or three buds of the base. In some cases it may be advisable to remove an old branch, laying in a young one to take its place. When this is done, simply cut the branch back to where it is alive. As a rule, the shoots of the summer-flowering *Ceanothus* die back about halfway. Your Lemon-scented *Verbena* may be cut back fairly hard in February. Cut it back as near the wall as possible. It may be increased by inserting cuttings of half-ripe shoots in sandy soil in a close frame during June, July or early August.

TREES IN EXPOSED POSITION (A. H. Brydon).—You cannot do better than use bands of felt or carpet to prevent the tarred string or wire from injuring the bark of your trees. Tarred string is really better than wire, for in the event of it becoming too tight, it is more likely to be broken by the increase in girth of the trees than wire. If wire becomes too tight, it soon injures the trees seriously. Providing either string or wire is examined once a year, however, it is not likely to cause any serious injury. For windswept positions it is wise to plant short, sturdy trees in preference to those which are tall and slender, for the short ones become acclimatised and able to look after themselves more quickly than the taller trees.

WHEN TO SOW BROOM SEEDS (V. C.).—Seeds of common Broom and Welsh Poppy may be sown at once, or be kept in a cool room and sown in February, according to convenience. The Broom seeds may be sown in pots, pans or boxes in a cold frame, or they may be sown out of doors. Use light, loamy soil and cover the seeds with soil to a depth of about one-sixth of an inch thick. The Poppy seeds may be sown in pots or pans in a frame. Use light, loamy soil containing sand and leaf-mould, and cover the seeds very lightly with fine soil. Place a sheet of glass over the surface of the pot or pan, and water carefully. In both instances the seeds may be sown thinly. As a rule, they germinate without trouble, and the seedlings are soon ready for pricking off thinly in boxes or for placing singly in small pots.

THE GREENHOUSE.

SCENTED-LEAVED PELARGONIUM (Lady C. S.).—You have been rightly informed as to Pretty Polly being the correct name of the scented-leaved *Pelargonium*; but it is not a scarce variety, and can be readily obtained from dealers in this class of plants. Try Messrs. Cannell and Sons of Eynsford, Kent.

BRUGMANSIA NOT FLOWERING (T. H. P.).—A difficult question to answer, for as far as one can judge by your letter, the *Brugmansias* have been correctly treated, and the two old plants at least should have

flowered well. One thing to bear in mind, and which, perhaps, may be the cause of your non-success, is that these plants are liberal feeders; hence they require to be well watered during the growing season with frequent doses of liquid manure. A sunny spot out of doors during the summer should be just the place for them. As their root action is so vigorous, good-sized pots are of course necessary, while the larger they grow the more floriferous are they. You do not say the size of your old plants, but perhaps with the increase of stature they will give satisfaction another year.

GLOXINIAS DISEASED AND PLANT TO NAME (K. K.).—Your *Gloxinias* have been badly attacked by a small microscopic insect, commonly referred to as the Begonia mite, owing to the fact that it was first noticed on this plant. The ravages of the mite have led to a diseased condition of the leaves; hence the brown patches. In the damp atmosphere the decay would be more pronounced than in a drier one. This mite may be kept in check by vaporising with nicotine or dipping the plants in a mixture of Tobacco water and soft soap. As the season, however, is so far advanced, the diseased plants will not flower this year; hence they should be isolated from the healthy ones, and, as soon as the tops die off, the old leaves should be burned. Next year a sharp look-out must be kept for these pests, and at the first sign of any of them the house should be vaporised. The specimen enclosed was far too shrivelled to be sure of its identity, but as you suggest it is a greenhouse climber, we think it is *Maurandia Barclayana*. If so, it will ripen seeds, from which young plants may be raised. The seeds should not be sown until the spring. In future queries a few more details would be a great advantage to us, our object being to make the replies as exact as possible.

FRUIT GARDEN.

LOGANBERRIES: CUTTING OUT OLD CANES (Miss E. M.).—All old canes—those that have fruited this year—should be cut out at once; also the very weak new canes if they would cause overcrowding. Thus the maximum amount of light and air will reach the new canes retained, and they will be well matured by the end of the season.

PEACH PRINCESS OF WALES GOING BAD IN THE CENTRE (F. C. Rogers).—This variety is very subject to this disease, for what reason nobody, as far as we know, can tell. The cavity at the base of the stalk is large in this variety, and is often slightly open to the centre of the fruit. Earwigs soon find this out and penetrate to the centre, and possibly cause the decay.

GRAPES SHANKING (E. F. Fuller).—Shanking in Grapes is often brought about by various causes, such as sour borders, bad condition of the roots of the Vines, and overcropping; in fact, by almost any conditions inimical to the healthy growth of the Vine. In your case we think the roots are at fault. Evidently they are feeble, or your Grapes would have been better developed. The best thing for you to do will be to take away the top soil of the Vine border until a good number of roots are seen, even if you have to take a foot of soil off. Then give the border a top-dressing of the best Vine soil, 6 inches deep, over the roots as far as they extend. The best time to do this will be as soon as the Vine leaves have fallen.

CULTIVATION OF BANANAS (H. E. S.).—The culture of the Banana under glass is not difficult, providing rich soil, a plentiful water supply, a high temperature, moist atmosphere and proper ventilation are available. The best kind to grow indoors is the one grown in the Canary Islands, *Musa Cavendishii*. This rarely exceeds 8 feet in height, while the varieties of *M. sapientum* may exceed that height by 8 feet or 10 feet. Two methods of culture are available, for the plants may either be grown in borders or in tubs or boxes. The best results may be expected from border culture, by reason of the more extended root-run. The bed should be 3 feet deep, at least half of that being above the floor of the house. Beneath the bed, flow and return hot-water pipes should be laid, in order to keep the soil warm. Drains to take away the superfluous moisture must be laid in the bottom of the bed, and over them and all over the bottom of the bed 9 inches of broken bricks, topped with clinkers, should be laid. Over the clinkers lay turves the grass side downwards; then fill up with good, rough, fibrous loam into which leaf-mould, well-decayed manure, coarse sand and half-inch bones have been mixed. When the soil has become warm, plant suckers detached from old plants. Do not overwater before the roots have become really active, after which an abundant supply, warmed to the temperature of the house, will be necessary at all times. Keep the plants well syringed twice a day, and provide a minimum temperature of 65° at night, rising to 75° in the daytime, or higher with sun-heat. Do not crowd with other plants, and when the flowers appear keep the house on the dry side for a week or two, syringing the leaves of the plants but not the flowers. As soon as the fruits are set, feed the plants well with manure-water and give a mulch of manure over the roots. At this time a little extra ventilation may be given, but shading, except of a very light character, is not desirable. Pots, tubs or boxes 2 feet to 2½ feet in diameter and 2 feet deep may be used for single plants, and the same method of cultivation as that already described can be followed, with the exception that more feeding will be required owing to the restricted root-run. Feeding in this case will be necessary long before the flowers appear. Propagation is always effected by means of suckers detached from old plants. The way to succeed with Banana culture is to make sure that the plants shall not receive a check from start to finish.

THE GARDEN.

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OCTOBER 3, 1914.

NOTES OF THE WEEK.

Our Special Rose Number.—Following our usual custom, we shall devote a considerable portion of our next issue to special articles on Roses. These will be written by some of the best authorities on our national flower, and will, we feel sure, prove of considerable interest and usefulness to our readers. The planting season for Roses will shortly be with us, and many will undoubtedly wish to add to their existing collections, and so do all they can to keep their gardens thoroughly up to date. In addition to a number of charming half-tone illustrations, a coloured plate of three superb garden Roses will be included. The price will be one penny, as usual.

Rose Amateur Teyssier.—Although sent out so long ago as 1900, it is seldom that one finds this excellent and charming Rose growing in gardens. The reason for this is difficult to understand. On the recommendation of a rosarian friend, a few years ago we planted some bushes, and few other sorts have been so consistently good. It is moderately vigorous, flowers freely from late June onwards and is rarely attacked by mildew. The blooms are creamy white, with deep yellow centres, and owing to their exquisite shape are excellent for button-holes. The illustration on this page represents a single spray of blooms cut the third week in September. Those who appreciate Roses of this colour should certainly plant Amateur Teyssier.

British Fruit Show Abandoned.—Just as our last issue had gone to press we received a notice from the Royal Horticultural Society stating that the British Fruit Show, arranged to be held on September 29 and 30, had been abandoned. The reason given for this decision was that the military authorities had taken over the society's hall, and that it was impossible to procure another building large enough and suitable for the purpose. At a time such as this, when considerable interest is being taken in all kinds of home-grown produce, it is regrettable that some temporary arrangement could not be made, even if the show had to be on a smaller scale than in past years.

Result of Our Garden Planning Competition.—The work of judging the numerous plans sent in for our competition for planning and planting the little garden is now proceeding, and at the time of going to press is nearing completion. The task has been a very heavy one, but, at the same time, one of considerable interest. We hope to publish the results, with the first-prize designs, in our issue for October 17, when the ideas set forth will be available for adoption by those who are contemplating the laying out

planted more closely than the more robust sorts. It is one of the daintiest white Roses that we know for cutting, and the fragrant blooms last in good condition for some time when placed in water.

A Beautiful Grey and Blue Bed.—One of the most pleasing flower-beds that we have seen for a long time is situated at the lower end of the Broad Walk at Kew, near the lake in front of the Palm House. This is a circular bed, planted thickly with *Ageratum* Princess Pauline, with dot plants, 2½ feet to 3 feet apart, of the grey-leaved *Centaurea candidissima*. The blue flowers of the former harmonise perfectly with the grey leaves, and create an effect that is as pleasing as it is the acme of good taste.

The "Breaking" of Tulips.

A writer in our contemporary *Irish Gardening* for September says that he is very much inclined to think that "breaking" in Tulips is caused by the presence of lime in the soil. We take it that he means when they have been transferred from a soil without lime to one in which there is an adequate quantity. As we believe there is a great deal of trouble in this respect in many places, especially among the Darwins, it would be of both interest and utility to many of our readers if some of those who have suffered in this way would send us a short note for publication, saying if they can trace the "breaking" in their case to this cause.

Collarette Dahlias for Large Beds. Although a good many excellent gardeners do not care for the Collarette Dahlias—single varieties with a



AUTUMN BLOOMS OF ROSE AMATEUR TEYSSIER.

of new gardens or the remodelling of existing ones.

White Rose for the Autumn.—Those who wish for a good bed of white Roses for the autumn should plant Mrs. Herbert Stevens, a Hybrid Tea variety sent out by Messrs. McGredy and Son in 1911. Although rather small, the flowers are wonderfully pure, much more so than those of the better-known Kaiserin Augusta Victoria, and they also possess the additional merit of being held more erect on the stems. As this Rose is only of moderately vigorous habit, it should be

pronounced collarette or ring of projecting florets surrounding the central disc—they are exceedingly showy for bedding purposes, and, owing to their long, erect stems, the blossoms are also excellent for cutting. The following varieties, selected from a large collection a few days ago, are about the best for both purposes: Maidens, bright yellow; Purity, white; Louise, crimson, white collarette; Ailsa, reddish purple, edged white, and white collarette; Holyrood, crimson, edged yellow, and yellow collarette; and Gunfleet, scarlet, and yellow collarette.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Flowers for Wounded Soldiers.—Everyone will doubtless fully sympathise with the sentiment to which expression is given under the above title by Mr. Faudel-Phillips in the issue of *THE GARDEN* for September 19. The appeal to gardeners generally—who are all, of course, as is rightly stated, anxious to render some service at this time—to make contributions in gardening kind to hospitals which have been reserved for the use of our Territorial Forces will probably find ready response among all sections. To this end, and in view of the unfortunate possibility of the necessity for even an increase in the number of hospitals in different parts for the reception of our sick and wounded soldiers before the close of the war, I would venture a suggestion that horticultural societies might lend not inappreciable aid in the direction mentioned by forthwith commencing arrangements for bulb shows, to

deservedly needs all the support possible at this time.—B. W. LEWIS.

A Useful Vase Flower.—*Hunnemannia fumariæfolia*, among its other good qualities, proves to be a most useful vase flower with us, the flowers lasting longer in water than anything else in the hot weather. The plants from which we are now cutting were potted up from the open ground last autumn, and have been kept growing away strongly ever since. They are still full of flower and bud, and look like giving a good supply in a cool greenhouse until late autumn.—F. HERBERT CHAPMAN, *Rye*.

Tomato Fruits Not Colouring.—In many districts Tomatoes have not coloured well during the past summer. Patches of green are to be seen on many specimens, and, of course, this is a defect and lowers their quality either for sale or home consumption. There is an insufficiency of potash in the soil, and if a small quantity be applied, and also some sulphate of ammonia, the fruits will colour splendidly. This treatment will do some good if carried out this year, but it should be particularly borne in mind for next year. The

will be as light and clear as amber. Put them in the pan and let them boil twenty minutes; they never get hard. For Quince jelly the water they were boiled in may be used to make a jelly of the parings. Add 1lb. of white sugar to each pint of juice and boil for half an hour.—ANNE AMATEUR.

Brilliant Montbretias.—Our large cultures of *Montbretia* novelties give rise to many points of interest. For instance, the question of the most brilliant red *Montbretias* comes to mind. Usually the palm for the richest colour is awarded to Lord Nelson, but our observations tend to a different judgment. Three varieties will be mentioned in this note as being specially brilliant—*Volcano*, *Pilot* and *Victory*. The finest of all in colour is undoubtedly *Victory*, a pure scarlet of pretty form, branching habit and exceptional brilliance. The colour is unrelieved save by the yellow eye. It is altogether a most glorious colour. *Volcano* is larger, a fine notable variety, a brilliant orange scarlet, with a crimson suffusion near the centre. It is tall, well branched and of striking appearance. *Pilot* is almost equally good, giving large flowers of a glowing orange scarlet shade. Save for the orange centre, this variety gives a pure self colour, very effective, free and good. All three will prove worthy of attention when known to the *Montbretia*-lover.—P. S. HAYWARD, *Holland House Gardens, Clacton-on-Sea*.

A Little-Known but Useful Climber.—To anyone requiring a rapid-growing and free-flowering climbing plant, I can recommend *Senecio scandens*, a species of recent introduction from China. It is not often met with in many gardens. This has the great advantage of flowering late in the summer and autumn, and, being a rapid-growing and profuse-flowering plant, it should prove a great acquisition to our hardy flowering climbers. A plant on an eastern aspect began flowering about the middle of September last year, and was covered with its small, orange yellow, starry flowers for quite two months. This species should prove extremely useful for the pergola in autumn, when many of the summer-flowering climbers are past and flowers none too plentiful. Probably the most picturesque position of all for this plant would be to allow it to ramble through the branches of any old Apple tree, in the way we too seldom see the beautiful *Polygonum baldschuanicum*.—R. FINDLAY, *The Gardens, Logan, Wigtownshire*.

Ceanothuses in Pots.—A note that appeared early in spring concerning the value of *Ceanothus Gloire de Versailles* when grown in pots was of considerable service in directing attention to its beauty when grown in this way. Though blue flowers are admired by everyone, they are at no time too plentiful, especially among shrubs that flower early in the year. For this reason I favour the employment of some of the early flowering kinds for greenhouse decoration, as they can be had in flower sooner than *C. Gloire de Versailles*. Two good kinds for this purpose are *C. dentatus* and *C. veitchianus*, this last being of a particularly pleasing shade of colour. Even these are not at all amenable to hard forcing, but need to be brought on very gradually. They can, however, be had in flower by the end of April, and at that time their pretty flowers, which are freely borne, are much appreciated. As advised in the case of *C. Gloire de Versailles*, it is very essential that after flowering they are plunged outside in a spot fully exposed to sun and air. An occasional dose of liquid manure is also of great service when they are making their growth.—H. P.



THE NEW ZEALAND FLAX AND NEMESIAS IN MOORAGH PARK, RAMSEY, ISLE OF MAN.
(See page 481.)

be held early in the New Year, the primary object of which should be a distribution of the resultant exhibits among hospitals or convalescent homes. There will, no doubt, be an ample number of channels, too, to which any realised profits might find their way. Or, of course, the opportunity obtains for individuals to render similar service by growing pots of bulbs for distribution. Pots of most kinds of bulbs will last in bloom for about three weeks; hence they make acceptable and much appreciated gifts to all such institutions as those to which reference has been made. Planted now, they can be had in bloom by Christmas and onwards, according to variety. Their easy cultivation, together with their trifling cost, should make such interesting work popular with all who have a desire to show some slight reciprocal feeling towards those who have endured much on our behalf. A further—and, I submit, not unimportant—object which would be served by the practical operation of the foregoing suggestions would be the desirable one of assisting, in some little measure, the nursery trade—a trade which

potash should be applied first, then the sulphate of ammonia. As potash may be scarce next year, cultivators should burn as much garden rubbish, hedge trimmings and wood of various kinds during the autumn and winter, and mix the ashes with the soil.—G. G.

Ripe Tomato Chutney : Mrs. "Busy Bee's" Recipe.—From "Anne Amateur's" manuscript book: Ingredients—7lb. ripe Tomatoes, 1 pint vinegar, 3½lb. sugar, 1oz. Cloves, 1oz. Allspice and 1oz. Cinnamon (whole spices are best). Method—Scald and peel the Tomatoes, drain them well. Boil for five minutes the vinegar, sugar and spices (tied in a muslin bag); then put in the Tomatoes and boil for half an hour. Keep in a stone jar, covered tightly.

Preserved Quinces : A Kentish Farmhouse Recipe.—Ingredients: Quinces, sugar and water. Method: Pare and quarter the fruits, boil in enough water to keep the pieces whole. When they are tender, take them out and to each pound of Quinces add 1lb. of white sugar. Let them stand with the sugar on until the next day, when the syrup

Fasciation in Roses.—In pruning a Rose hedge of mixed varieties in my garden, which I planted about twelve years ago, I found that a stout leading stem of a Crimson Rambler had become fasciated about three feet from the ground, the flattened fasciation increasing in width and becoming more pronounced for another 2 feet or more, where it branched off into five apparently normal healthy stems for another 4 feet or 5 feet. As the whole stem and its offshoots appear strong and vigorous, I am leaving it to see if it will produce any further fasciation next season.—J. R. J.

Hardy Fuchsias.—In many parts, and especially in districts near the sea, hardy Fuchsias form a charming feature during the summer months, and often on into the autumn. There are places, however, where their merits are not recognised to the extent they might be, for even if the plants are cut to the ground during the winter, young shoots are quickly pushed up in the spring. A few leaves scattered over the ground will serve to protect the roots during the winter. The hardiest of all, and withal one of the very best, is *Riccantonii*, which in particularly favourable districts attains almost the dimensions of a small tree. If treated as a herbaceous plant—that is, cut to the ground each season—it will attain a height of 4 feet to 5 feet and flower profusely. Other good old kinds are *coccinea*, *corallina*, *globosa*, *gracilis* and *virgata*. Some distinct varieties raised originally by M. Lemoine of Nancy are *Drame*, *Elysée*, *Enfant Prodigue*, *Florian* and *myrtifolia minor*. The hardiest Fuchsia, with white corolla, is *Mme. Cornellison*, a variety about fifty years old, but still the best for many purposes.—H. P.

Roses with Split Blooms.—Your correspondent "R. F. C." raises an interesting question as to the cause of split or divided blooms in Roses, and suggests there is some definite cause and that great credit will accrue to the discoverer of it. He gives us a list of Roses—W. R. Smith, the two *Cochets*, *Mrs. Edward Mawley* and *Charles Lefebvre*. He might have gone through the whole list of exhibition Roses from *Mildred Grant* to *Bessie Brown*, &c., and included all Roses that have more than an average number of petals, and he would still have been correct in his statement that they seldom give a perfect bloom. So far one can agree with him, but when he goes on to suggest that it is some outside influence at work, such as frost, wind-bruising or twisting and change of temperature, then I must part company with him. I am inclined to think that there is no such cause. Take W. R. Smith, for instance. I suppose 90 per cent. of its flowers "come split," as the Rose-lover has it, and the reason of it is not frost or any outside interference, but simply the "nature of the beast." No amount of protection (under glass if you like), cultivation and high feeding (this latter, as tending to produce more petals, is likely to aggravate the trouble) will alter the fact. Nature cares nothing for our artificial standards as to what is perfect. Her standard, as far as one can form an opinion on it, is something very different; in fact, I do not think I am going too far or saying what is incorrect if I state that left to herself she would never have produced such a monstrosity (to her) as W. R. Smith. The ideal Rose has five petals and numerous stamens; the artificial W. R. Smith has numerous petals (about one hundred and twenty) and few, if any, fertile stamens. If this theory is correct and the normal W. R.

Smith is always divided or split, then he who only wants perfect exhibition blooms should clearly leave it alone. And yet it is a beautiful Rose, fine healthy grower, magnificent foliage; no mildew, no black spot, no rust ever attacks it; and as a standard it makes one of the shapeliest and handsomest of trees. In the young state it is a beautiful bud, ideal for a button-hole. As a hardy Tea it is undoubtedly one of the best of the family, and something of the same sort can be said for all these flowers that "split." It is undoubtedly true that the fewer the number of petals the less likelihood there is of this fault occurring until one reaches the natural Rose, when it is impossible. So I am afraid, "R. F. C.," there is no remedy; in fact, if W. R. Smith could be made never to split, it would not then be W. R. Smith, but a different Rose altogether, worthy to be called after its raiser, lucky man!—HERBERT E. MOLYNEUX, *Southampton*.

New Zealand Flax in the Isle of Man.—It may interest your readers to learn that at the present time there are twelve large clumps of New Zealand Flax, *Phormium tenax*, in full flower-spike in the Mooragh Park, Ramsey, Isle of Man, and that about seventy other clumps of a few years later growth are in fine healthy condition, and will in the course of a year or two add very materially to the attractions of these beautiful pleasure grounds. The history of these plants and their appearance so far from their native habitat savours somewhat of the romantic. In the summer of 1904 the Town Clerk of Ramsey received by post a package of seed from a resident in Christchurch, New Zealand. The sender signed himself "J. J. D.," a native of Ramsey, who left his home sixty years before. He had read of the development of the Mooragh Estate and the formation of the Mooragh park and lake, and was desirous of contributing something ornamental that would be unique, and that would attract and interest visitors to his native town. The mystery of "J. J. D." was as good as a Yankee guessing competition, and after the lapse of two years the problem was solved by Dr. F. S. Tellet, J.P., who remembered a blacksmith of the name of J. J. Dailey leaving Ramsey for New Zealand when he was quite a young lad. In the meantime the Town Clerk had sent out packages of the seed to about a dozen leading gardeners in the island; but the only successful grower was Mr. Thomas Martin, gardener to Dr. J. M. Barbour, M.O.H., Ramsey. Mr. Martin raised a dozen strong plants, and these were removed to the Mooragh Park, where they immediately took root, and have developed into the present fine clumps. In October, 1906, the Town Clerk received a further quantity of Flax seed from Mr. Dailey, and he thought he would try if it were possible to grow the seed in the open without the aid of artificial heat. In this he was entirely successful, for a handful of the seed sown in a box in the open produced about eighty plants, seventy of which were transferred to the Mooragh Park. He retained about ten for his own garden, where the soil and situation were different. In both instances the plants are growing remarkably well, and it is evident from these facts that the climate of the Isle of Man is suitable for the growth of this ornamental plant. Six of the above plants are carrying over forty spikes, measuring over ten feet in height. On August 20 I collected ripe seed in perfect order, fit for sowing at any time. I enclose a photograph, which may be of interest

to other readers of your valuable paper. The plant there is in a large bed of *Nemesia Suttonii*, which has been greatly admired all the summer.—JOSEPH MILBURN, *Mooragh, Ramsey, Isle of Man*.

A KIRKCUDBRIGHTSHIRE GARDEN.

WHEN staying recently for a few days at Knockallan, near Castle Douglas, I had the privilege of visiting several scenes of great beauty and horticultural fascination, which will long abide in the regions of remembrance. Until, under the guidance of a cultured companion, I saw for the first time the grounds and gardens of Mallance, I had no conception that a mansion with such a charming environment of stately trees and exquisite flowers existed in the fair region to which Knockallan belongs. To me, I confess, it was at once a surprise of the most charming nature, and a veritable revelation of what Art can accomplish for the ennobling of Nature. The day, though tropical in its atmospheric conditions, was otherwise a near approximation to perfection, for it was, in the language of the saintly George Herbert,

"calm and bright,

The bridal of the Earth and Sky;"

and the scene was also worthy of the splendid affluence of sunlight whereby it was revealed. The extensive flower garden was especially radiant with its green environment of majestic woods, amid the coolness of whose shadows it was a kind of rapture at intervals to rest. For on such a brilliant day it is quite possible to be, like the immortal Prince of Denmark, "too much in the sun." And I sometimes dream that, in this respect, the flowers we so greatly love and so tenderly and patiently cultivate are not unlike ourselves; for though they seem to rejoice in the bright presence of the "Gardener of the world" (as Robert Louis Stevenson called the sun), yet they are never so beautiful as in the early morning or the hushful twilight, when they are in partial shade. Seldom have I seen *Begonias*, *Pelargoniums*, or the marvelously coloured *Antirrhinums* luxuriating in any gardens in such a perfect light.

The accomplished head-gardener at Mallance (Mr. Stewart) has everything there in as artistic and impressive form as it is possible for a lover of Nature to conceive, and that is saying much. He was, in his earlier years of probation, he informs me, with that consummate botanist and arboriculturist Sir Herbert Maxwell, and an experience of this kind means not only exacting industry and elaboration in every department, but also intense horticultural conscientiousness.

These grand attributes are everywhere reflected in the gardens of Mallance, where fruit and flowers of every description are grown with earnest attention, and consequently with splendid success. Never since the memorable days when I used to visit the king of pomologists, the late Mr. Thomas Francis Rivers, at his great nurseries in Hertfordshire have I seen Apples and Pears anywhere so effectively cultivated under glass. It only remains to be added to these fragmentary and inadequate observations that botanical trees and tropical plants of every impressive description in these beautiful gardens are grandly grown.

DAVID R. WILLIAMSON.

Manse of Kirkmaiden, Wigtownshire, N.B.

PRESERVING NUTS FOR WINTER USE.

THIS season there are abundant crops of the Nut tribe, such as Walnuts, Spanish Chestnuts, Filberts and Cob Nuts. Now that all foodstuffs should be economically treated, hints on the best methods of preserving Nuts will be useful. Too often those with no experience attempt to preserve these Nuts in the worst possible place—a dry room—with the Nuts thinly spread on the floor or shelves. Some will place the Nuts in a vessel and cover them with salt, which usually ends in the Nuts being quite unfit for use.

The best place is outdoors, burying them in proper receptacles 2 feet under the surface where they are in an equable, low temperature secure from air, and under such circumstances they

Walnuts.—When these fall from the trees naturally or with an easy shake of the branches, the husks should be removed and the Nuts dried in the sun in the open, or under cover. The shells should be thoroughly cleansed from the fibrous portions of the husks, which sometimes adhere to the shells. Some persons wash them, but this is neither necessary nor wise. Take an ordinary corn sack or coarse bag, place the Nuts inside, and with one person at each end of the sack holding the corners roll the Nuts briskly backwards and forwards until they are quite clean; then thoroughly dry them, which should not take more than two or three days to effect. If they are forcibly dried or exposed too long to the sun or air, the kernels are apt to shrivel, which means a loss of bulk, freshness and flavour. Any quantity up to a bushel can be placed in one vessel, although rather less might be safer.

Filberts and Cob Nuts should be quite ripe when gathered and thoroughly dried with the

behold. This Broom is really a hybrid, the result of crossing *C. purgans* with *C. albus*, and plants can be purchased cheaply. In common with other members of the family, it will thrive in very poor sandy soil; but this must not be taken as an indication that it does not appreciate a more generous diet. In fact, it will do well in almost any kind of soil that is well drained. Early November is a good time to plant, or the early part of March if more convenient; but the young plants should be obtained in pots, so as to avoid excessive disturbance of the roots. H.

ANNUAL FLOWERS TO SOW IN AUTUMN.

ALTHOUGH many hardy annual flowers are now sown in the autumn, there is no reason why, under certain conditions, this phase of their cultivation should not be much more widely extended. Nature, in her wisdom, provides for the sowing of nearly all seeds as soon as they are ripe, and, were the conditions under which they ripened perfectly natural, no better course could be adopted. But gardening is an "art that doth mend Nature," and many of the flowers, or at least their progenitors, that we grow in our gardens are natives of far warmer climes than ours; hence it follows that we must, if we will grow them successfully, save the seeds until the frost and damp of winter are past.

On the other hand, there are a number of annual flowers which are quite hardy with us, or at least sufficiently so to enable a large percentage of seedlings to survive an ordinary winter, and it is the sowing of such that I would advise in the autumn. But let no one imagine that all the "hardy annuals" of the seedsmen's catalogues can be successfully sown at this season. By some miraculous reading of the English language, "hardy" means to the seedsmen those kinds of annuals that may be successfully grown from seed onwards during late spring and summer without the aid of glass. Thus we find the Indian Cress, or so-called *Nasturtium*, one of the most tender annuals that we know of, classed as "hardy." Strange as it may seem, this word of warning is necessary, as I have on more than one occasion found seeds of such tender plants being sown in the autumn.

Even though we select our kinds aright, the vagaries of our English climate, as well as the vast difference in the character of the soil, must be fully borne in mind, and both on occasion can prove exceedingly troublesome. Over our climate we have no control; consequently in sowing annual flowers in autumn, which means that the seedlings will have to stand out all the winter, we are taking a sporting chance, and one that usually gives us a fair return for our outlay of time and expenditure, which, by the way is usually insignificant. With soil, however it is different. Here we know what we have to contend with, and it would be fallacious in the extreme to sow annuals now in soil that is mainly composed of clay. Hardy though the plants might be, they would surely succumb to the cold moisture that would ever be present in the soil in too great a quantity during the short, dark days of our long winter months. This, again, is where the gardener's art mends Nature. Instead of following her plan of sowing seeds as soon as



A YOUNG PLANT OF THE EARLY FLOWERING BROOM, *CYTISUS PRÆCOX*.

come out quite plump and full of flavour even six or twelve months afterwards. A low cellar answers fairly well if the floor is of brick and inclined to be damp. No matter where they are stored, it is important that the Nuts be thoroughly prepared before they are transferred to their final quarters, and unless they are stored in a fit condition, success cannot be assured.

The Receptacles, too, in which they are placed must be of the right kind. Some employ close-fitting wooden boxes, and with care they answer the purpose. The best utensil, however, to employ is an earthenware vessel, glazed inside, with a tightly fitting lid, or, in other words, an ordinary bread pannikin. Failing this, a very good substitute can be made with an ordinary flower-pot, blocking up the hole at the bottom with cement and having a closely fitting slate lid. Give the outside of the pot a couple of coats of paint to eliminate its porosity, and thus prevent the ingress of moisture to the Nuts.

husks still on, packing them loosely in similar vessels.

Spanish Chestnuts should have the outer, spiny husks removed, the Nuts dried and packed closely in a similar way.

Swanmore, Hants.

E. MOLYNEUX.

THE EARLY FLOWERING BROOM.

THERE are few more beautiful plants in the garden during the late days of spring than the early flowering Broom (*Cytisus præcox*). This hardy shrub usually opens its creamy white flowers at the end of April or the first week in May, just when the last of the trumpet Daffodils are waning and the Poets have taken up the display. As will be seen in the accompanying illustration, the blossoms are produced in great profusion, each slender, graceful shoot being almost covered. The flowers last in good condition for about three weeks; but even at other seasons the shrub is pleasing to

they are ripe, he keeps them safe and dry until the more genial days of spring, when his clay soil has become warmed by the sun and in a more porous and better condition for plant life.

But there are a multitude of gardens the soil of which is composed largely of sand, or a thin layer of soil over chalk, and here it is that the hardy annuals which I will name presently may be sown in September or the first week in October. Indeed, the superiority of autumn-sown plants over those sown early in April in these gardens is astonishing. Not only do they commence to flower much earlier, but they are more sturdy and give far better results over a much longer period. The soil may be dug well and made moderately firm previous to sowing, and the surface ought to be raked down so as to get a fine tilth, as the seeds of most flowers are small. The one evil that must, however, be guarded against is deep sowing. This is where Nature teaches us a lesson. In very few instances indeed does she provide for deep sowing, the majority of seeds having to be content with what little soil may be washed on to them by rain or blown over them by wind. Many of the failures that are attributed to other causes are really due to too deep sowing. For most kinds of annual seeds the merest covering of fine soil is sufficient, and even for Sweet Peas an inch is enough at this season. The necessity for thin sowing and early thinning of the seedlings cannot be too strongly emphasised. It is most important in the spring, but doubly so at this season, because the young plants have subsequently to withstand the cold of winter, and it is imperative that they be as sturdy and robust as possible.

The sowing of Sweet Peas in autumn is now very largely adopted in gardens where the soil is not heavy clay, and it is an annual that invariably gives the best results from such sowings. But it is a flower by itself, a queen among annuals, and its cultivation is so well understood and so different from that required by ordinary annuals that there is no need to go into details here. Other annuals that may be sown during the next few days are Godetias and Clarkias, *Nemophila insignis*—if cats are not plentiful—*Silene pendula*, *Candytuft*, *Bartonia aurea*, *Virginian Stock*, *Cornflowers*, *Shirley Poppies*, *Eschscholtzias*, *Limnanthes Douglasii*, *Collomia coccinea*, *Larkspurs*, annual *Chrysanthemums*, *Ionopsidium acaule* and *Erysimum*.

There are doubtless several others that would survive the winter in many gardens, and the wise gardener will ever be experimenting in this direction. This finding out for one's self what is best for any special garden or locality is one of the greatest joys experienced in the cultivation of flowers.

S. X.

CLIMBING ROSES WITH LARGE FLOWERS.

ALTHOUGH the Rambler Roses of Dorothy Perkins and American Pillar types are very beautiful and have their use in the garden, there are many owners who naturally desire others which have large specimen blooms suitable for cutting. The list of such kinds is not nearly so limited as one might at first imagine. One of the strongest growing is Conrad F. Meyer, a sweet-scented Hybrid Rugosa Rose with pale pink flowers. Other good varieties are Bouquet d'Or, an improved Gloire de Dijon; Ards Rover,



ASTER VIMINEUS LOVELY, A NEW DWARF MICHAELMAS DAISY
WITH LILAC-PINK FLOWERS. (See page 486.)

crimson; Florence Haswell Veitch, brilliant scarlet crimson, sweetly scented, but not quite so strong growing as some; Longworth Rambler, cherry red; Billiard et Barré, yellow; Mme. Alfred Carrière, white, very fragrant; Dr. Rouges, red, shaded orange, petals curiously twisted; Lady Waterlow, though often used for bedding, will make growths 10 feet long; and Johanna Sebus, reddish blush, very fragrant. In addition to these, there are the climbing and rambling forms of such good, large-flowered Roses as Mrs. W. J. Grant, Liberty, Frau Karl Druschki, Lady Ashtown, La France, Caroline Testout, Kaiserin Augusta Victoria, Captain Christy and Papa Gontier. Although, as a rule, these do not ramble quite so freely as Longworth Rambler and Conrad F. Meyer, they are admirably adapted for covering

arches, the fronts of garden houses, pillars or rustic poles. In many instances the flowers are quite equal to those of the dwarfier forms, particularly if disbudding is resorted to when the flower-buds are small.

G. W.

TULIPS IN BEDS.

IT is an obvious truism to state that Tulips may be planted in beds, either by themselves or in combination with other plants. "You pays your money and you takes your choice." Being neither a thought reader nor a prophet, I am unable to say what that choice will be, for a grand mass of one colour, say, of Couleur Cardinal or Farncombe Sanders, is every bit as beautiful as a combination consisting of a groundwork of *Alyssum saxatilis* with dot plants of some dark late Tulip like Fra Angelico or Zanzibar. At one time I must candidly confess that I had decided leanings to the all one colour and one variety style; now I am much more like the old lady of Oxford and Cambridge Boat Race fame who used religiously to deck her stall every year with both light and dark blue, and who in consequence had to undergo a certain amount of chaff. The famous dead-heat year came and the laugh was on the other side. "Right at last! Right at last! Ha ha!" So I must write of both, for the two have run a dead-heat, and I want to be right at last. First, then, about the "all Tulips" beds. There are a few kinds, both in the earlies and in the May flowerers, that seem to stand out from the others as being peculiarly suited for massing.

Among these are the following: Early single—Prince of Austria, orange red; Couleur Cardinal, dark rich crimson; Vermilion Brilliant, bright scarlet; Keizerskroon, red, edged yellow; Scarlet Mammoth, midseason red of dazzling brightness; and Enchantress, ruby crimson edged pale buff. Early double—Schoonoord, pure white; Murillo, blush white; Vuurbaak, red. Darwin and Cottage—I limit myself to the dwarfier-growing kinds, as it is only in very large beds that the tallest ones look well: Millet, deep rich crimson; Clara Butt, rosy pink; Inglescombe Yellow, soft yellow; Thérèse Schwartz, lavender and mauve; Pygmalion, reddish violet; Corydon, silvery grey; Loveliness, soft rosy pink; Rev. H. H. D'ombrain, brilliant geranium red; Carnation, pointed pink and white; Marksman, brilliant scarlet; and Pompadour, long bloom, glowing crimson. Another way in which beds of all Tulips may be filled is by mixtures, but unless the space is a fairly large one, they do not show to advantage. The best way to manage smaller beds is by using confined assortments,

say, all mauves with just half-a-dozen dark ones, or all pinks, or all reds. A third way is by associating different heights of more or less the same shade. In the French branching Tulip, Mons. S. Mottet, we have, as it were, the mixing already done, for a bed of these gives exactly the effect that I have tried to indicate, and, besides, it is like Prince of Austria, in that it gives a double feast of colour, being white at first, but, like a good meerscham, colouring with age and becoming a pretty deep rose.

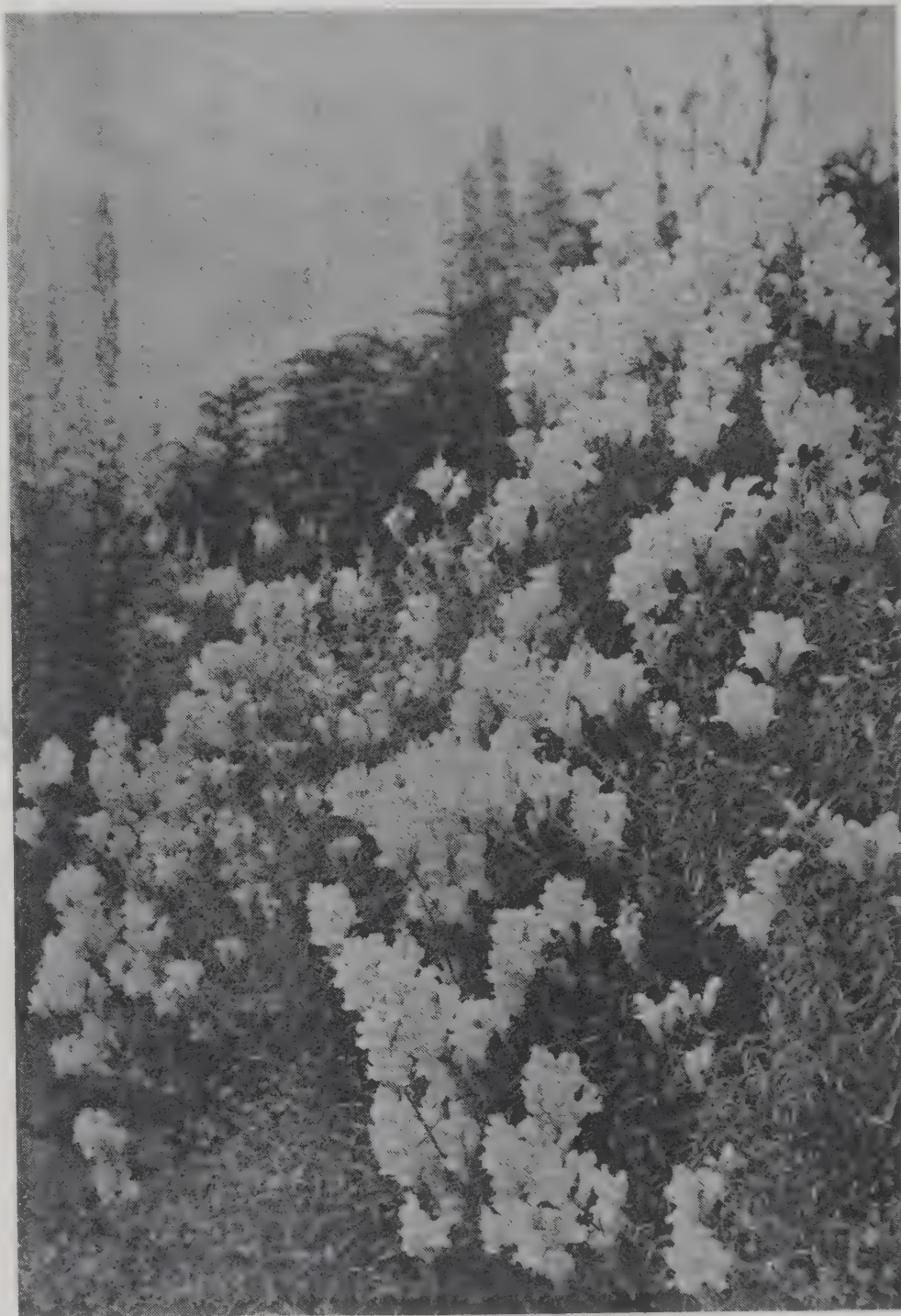
To keep the balance I now pass on to combinations of Tulips with other plants. In this connection may I be allowed to thank Messrs. Dickson and Robinson of Manchester for their most instructive exhibit of Tulip combinations at this year's Chelsea Show. In my opinion we want more of this style of thing. The flower-loving public want suggestions upon this very point. It is not always an easy thing to fix up really good combinations. Colours, habits, times of flowering, surroundings, have all to be considered, as well as the individual taste of the owner of the garden. I know what thought my good old friend the Rector of Acton Burnell, near Shrewsbury, gives to his spring bedding, and I know how well his care repays him. If he happens to read this article, he will see how I have drawn upon his store of knowledge in penning these suggestions, just as Messrs. Dickson and Robinson will see some of their Chelsea ideas here reproduced. One point occurs to me as worth mentioning before I begin the lists, and that is the background against which the Tulips will be seen when viewed from a distance. This is rather different from what I meant when I wrote above that the surroundings of the beds must be considered. By that I intended to convey the idea of the more immediate beds, plants, walls, or house of which the special one we are going to fill will be a near neighbour, and which I supposed to be observed from close quarters. Both the near and far view require consideration.

List of Combinations with Other Plants.—(1) A good dark blue Forget-me-not, such as

Indigo Queen or Miss Willmott, with Prince of Austria. (2) Queen Victoria Forget-me-not with variegated-leaved Yellow Prince. (3) Double Arabis with Macrospeila. (4) Dr. Mules or some other dark blue-purple Aubrietia with Picotee Tulip, and with or without an edging of the small variegated-leaved Funkia undulata. (5) Alyssum saxatile with a dark Darwin, such as The Sultan, Fra Angelico or Jubilee. (6) A reddish purple Aubrietia such as Whitewell Gem with Erguste or the striped Dainty Maid. (7) A band or edging of double white Arabis with any tall Cottage or Darwin Tulip in the centre. A soft pinky rose

such as Loveliness or a soft reddy orange such as Orange King are better than more violent contrasts. (8) A good strain of long-spurred Aquilegia, with tall red Tulips such as gesneriana major or Isis as dot plants. The Columbine will not be in flower, but the red popping up from among the feathery foliage and flower-buds is most effective. (9) A good Forget-me-not with Bouton d'Or and an edging of the *old original* Violetta. (10) Funkia Sieboldii (fol. var.) with King Harold (Darwin). (11) Mixed shades of crimson Polyanthus with either Solfatare or Ellen Willmott Tulips. (12) Maggie Mott Viola with a mixture

(19) Cheap Daffodils like princeps, which can be cut away after flowering, planted alternately and fairly closely with late Tulips gives two distinct displays, and as the boy said when his mother reproved him for being so wasteful as to eat butter with his jam, "No, ma, the same bit of bread does for both." (20) Wallflowers and tall late-flowering Tulips. Twenty-firstly and lastly, for the sermon is getting long, and at a seven or a multiple of that number seems in this connection not altogether an appropriate place at which to stop—for combinations are almost like the sand on the seashore in number—a broad edge of Maggie Mott with a central mass of Frans Hals or Pygmalion Tulips. A Dutch friend of mine always says when anything very much takes his fancy, "Fine! Fine!" I say the same of this, "Fine! Fine!" It is the set piece at the firework exhibition, and, like it, ends my display of aerial bedding. JOSEPH JACOB.



ANTIRRHINUMS OR SNAPDRAGONS GROWING IN A DRY WALL.

PLANTING IN DRY WALLS.

WHERE gardens are on hilly sites, giving opportunities for the making and planting of retaining walls, nothing is more satisfactory or encouraging than the rapidity with which they become clothed with more or less permanent vegetation. When flower borders are planted, however well and fully, there is some degree of their appearance till the plants have become established; but the conditions of wall planting are so favourable—the roots finding a cool, rambling region among the stones, the collars protected from winter cold and the heads in full air and sunlight—that they appear to establish themselves at once and more effectively. Planted a year and a half ago, and less in the case of the biennials, the wall surfaces, as shown in the illustrations, now present a fully clothed appearance, and, although the soil is of a poor, sandy character, the plants are in full growth and vigour. Masses of the grey Santolina set off the purple of Catmint

of lavender and mauve Tulips, such as La Tristesse, Erguste and Euterpe, with an odd Turenne or two, or some other dark variety for contrast. (13) Glyceria spectabilis with Clara Butt. (14) Galega Hartlandii (for greenery, and when the Tulips are over for flower) with a tall-growing variety such as Faust, Farncombe Sanders or Pride of Haarlem. (15) Leghorn Bonnet with the bronze foliage of an Astilbe. (16) Cerastium tomentosum with the dark Morales. (17) Orange and yellow Polyanthus Primroses with Golden Bronze (Toison d'Or) Tulip. (18) Erysimum Allionii with Remembrance or Ronald Gunn.

and the white and yellow of the Tree Lupines just above. In a year or two, when some plants of Cistus cyprus are grown—a few blooms show above the second patch of Santolina—the picture will be still more complete. Snapdragons are true wall plants, and should be used largely in the joints of dry walling. Besides those grown as annuals, it is well to make a second sowing about midsummer. This gives small plants to put into the wall joints towards the end of September, or at any time during the month when there has been a good rain. In many places they are too tender to survive in the open ground,

but the wall joint gives so much shelter and such a comforting degree of dryness in winter that the plants do well and are in bloom from the end of May and all through June, the flowering season being then taken up by plants made from cuttings and wintered in frames; these again being followed by the spring-sown plants. Foxgloves and Mulleins are also grand plants in walls where these are in gardens large enough for them not to be out of scale. But even in small places one need not be afraid to plant large things in walls. Many a planted wall is monotonous in effect because its occupants are small things only.

GERTRUDE JEKYLL.

THE CROCUSES OF AUTUMN AND WINTER.

ALTHOUGH they cannot be compared with the brilliant yellow, blue and white Crocuses that blow so freely in the early spring months, the species that naturally flower from October onwards until the dainty little *C. susianus* opens its blossoms in February are by no means devoid of interest. Indeed, some of the more showy ones form a delightful feature of the outdoor garden in the fast waning days of the year, and when kissed by the autumn or winter sun reveal hidden beauties that surpass the vivid hues of their spring brethren. For some inexplicable reason these autumn and winter Crocuses are not grown in many gardens; indeed, one might safely say that they are rarely met with outside the gardens of enthusiastic hardy plant lovers; yet they are by no means difficult to cultivate. It is true that some of the best are rather expensive, at least compared with the spring varieties, but not sufficiently so to account for the neglect that they suffer in most gardens. To gain the full beauty of the autumn and winter Crocuses, a sunny position, and if possible one sheltered from boisterous winds, should be chosen. It is only when the sun meets the flowers that they open and so display their beautiful venation of the segments and the rich colour of stigma and anthers. Wind, too, often causes much damage to the blossoms, as they are more fragile than those of many other plants. Ideal positions can, however, be found in most gardens without much difficulty. Where a narrow border runs alongside the west or south of the dwelling-house, the Crocuses under notice will find a happy home; or it may be that nooks bearing these aspects are available in the rock garden or to the front of the shrubbery border; any place, in fact, where the corms can be left undisturbed. Of equal importance to aspect and shelter is the question of soil. Not that these Crocuses are over-fastidious, but they resent excessive or stagnant moisture. A well-drained soil that is rather on the sandy side suits them

best, but any good soil that is not water-logged can have sand added to it for these flowers, should it be at all lacking in that substance. In fact, where the soil is at all heavy, it is best to place a layer of sand under and over the corms at planting-time, which is usually early in August, though July is better if corms can be obtained then. They may, however, be successfully planted as late as the first or second week in September, though so late a date is not advisable if it can be avoided. Although it is now too late to plant these autumn Crocuses, it will be of interest to draw attention to the best, as the earliest will soon be opening their blossoms. Those named as winter-flowering sorts can still be successfully planted, though the earlier the corms are consigned to Mother Earth the better. The depth to plant the corms is a moot point. I believe Mr. E. A. Bowles, whom his numerous friends style the "Crocus King," advocates planting about three inches deep, and under his clever

But I would advocate keeping each kind by itself. Thus in the rock garden a whole nook should be devoted to one, two or three dozen corms of one species, and the same course of grouping should be adopted where a border by the dwelling-house or other building is being planted. The following are all good autumn and winter flowering Crocuses that are not very expensive, and which are not difficult to grow: Autumn—*asturicus*, pale to deep mauve, with violet stripes at the base; *hyemalis* Foxii, white, veined rich purple, with yellow interior; *longiflorus*, one of the best, with beautiful soft lilac flowers; *pulchellus*, lavender blue, with white anthers; *Salzmanni*, lilac, with violet stripes; *sativus*, the Saffron Crocus, purple lilac, striped violet, with brilliant orange stigma; *speciosus*, the best of all autumn Crocuses, the bright blue flowers being particularly showy; *Aitchisonii*, a large-flowered variety of *speciosus*; *zonatus*, lilac, with orange zone. Winter—*biflorus*, white, striped violet;



A DRY WALL SUCCESSFULLY PLANTED WITH LUPINES, NEPETA MUSSINII AND OTHER LARGE-GROWING FLOWERS.

management they do remarkably well. For the ordinary mortal, however, such a course would lead to failure with many of the choicest kinds, and the safest plan I am convinced is to plant as shallow as possible; 1½ inches of soil on the corms is ample, and it ought to be in a finely crushed condition. The arrangement of the corms calls for some consideration. It must be admitted that single plants dotted about indiscriminately are neither effective nor pleasing, and it is to colonies that we must look for good effects. How large these colonies shall be will depend upon the space at disposal and the quantity that is to be grown

chrysanthus, yellow, variable; *etruscus*, pale lavender; *Imperati*, a beautiful violet-coloured Crocus; *Sieberi*, pale lavender blue; and *vitellinus*, yellow, with orange scarlet stigma. D. W. S.

LIFTING AND STORING BEET ROOT.

BEETROOT must not be allowed to remain in the beds to get frozen; but it is unwise to lift and store it too soon. All the roots must be so treated that they will retain their juices. Violent pulling of the roots from the soil must be avoided. When



A SUSSEX TRUG MAKER PREPARING WOOD FOR THE BASKETS.

this is done the tops are unduly bruised and the roots are scratched; thus bleeding occurs and loss of colour. We prefer to store Beetroot in sand; it closes tightly upon the roots and excludes air; the sand remains cool and does not heat, neither does it contaminate the roots. The latter should be lifted by means of a strong garden fork, with which the soil should be removed from the roots. Twist off the tops 3 inches above the crown. If cut, the sap-vessels are left open and bleeding may be excessive. Pack the roots in layers in sand in a cool shed; have the tops and the crowns just free of the sand. The heaps may be long and narrow, tapering to a point from a 3-feet-wide base, or pyramid-shaped. If severe frosts occur, cover the heaps with mats or straw. It is a good plan to grade the Beetroot—that is, to place the small ones in one heap, the medium in another, and the largest by themselves; then when required they can be used accordingly.

TRUG BASKETS.

ALL workers are apt to take too much for granted the tools of their trade, without which their own handiwork would be difficult, if not impossible. Yet there is no little romance in their making, and this is especially true of the gardener's trug basket. "Trug," no doubt, stands for trough, and one would have supposed that these shallow, trough-like wooden baskets—obviously convenient as they are for garden use—must have been used from time immemorial.

In fact, however, they were invented by one Thomas Smith of Hurstmonceaux, East Sussex, no longer ago than the end of the eighteenth century, and in that village and by his descendants most of the trugs used in all quarters of the world are still made. No common deftness is needed for their making, and a man may turn out six dozen in a week. The various processes are not split up among many, in the wearisome way of most industries, but each worker makes his baskets complete from start to finish. The thin, wide strips of wood which are the main feature of the trug are of Sallow (or "Sally" as they call it locally), of which Hurstmonceaux has long been cleared, and the supplies now come from East Kent. The splitting of the logs needs skill, and is done with a special long-handled axe, which has its cutting edge at right angles to the haft instead of parallel with it. The strips are then shaped with a draw-knife, the workman sitting on a "dolly," which is an ingenious combination of seat and adjustable vice. The rims of the baskets, two stiffening keels and the handles are of narrow strips of Ash, which are soaked in water to make them pliable before the parts are nailed together. The basket is finished by two strips of wood nailed across the bottom to serve as legs, but these are sometimes omitted. No doubt there are many curious trades like trug-making which minister to the gardener, all un-

conscious of the sources of his comfort, but there can be few so localised as that of Hurstmonceaux.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Heliotrope Mrs. J. W. Lowther.—A very handsome, free-flowering and heavily trussed variety, which, with a dwarf and vigorous habit of growth, should commend itself to all. It is most powerfully scented. From Messrs. William Cutbush and Sons, Highgate, N.

Aster Amellus Arethusa.—Quite a valuable addition to the Italian Starworts, the warm rose pink colouring being of a most welcome shade. Exhibited by Messrs. T. S. Ware, Limited, Feltham.

Aster vimineus Lovely.—A most beautiful and graceful sort, with elegant, horizontally disposed sprays arranged in well-branched panicles. The colour is lilac pink. (See illustration on page 483.) Shown by Messrs. H. J. Jones, Limited, Lewisham.

Salvia Griegii.—The flowers are about the size of those of *S. azureus grandiflora*, and coloured a brilliant scarlet. It is a very profuse flowering variety of neat habit of growth. It will be welcomed, too, by those who appreciate fragrant-leaved plants. Shown by Mr. Amos Perry, Enfield.

Pilostegia viburnoides.—A striking and somewhat remarkable new shrub from China, having slightly channelled, lanceolate, glossy green, leathery leaves 4 inches or 5 inches long, and large terminal clusters of creamy flowers. The species is quite new to cultivation, and if, when established, it proves to be an autumn-flowering subject, it will possess a value of its own. From the Hon. Vicary Gibbs, Elstree, Herts.

Dahlia Lord Kitchener (Cactus).—A very handsome exhibition variety of rich crimson scarlet shade. From Mr. Shoesmith, Woking.

Dahlia Neptune (Cactus).—The colour is rosy cerise, in a large and shapely exhibition variety.

Dahlia W. E. Peters (Cactus).—This is of rich wine red shade, in a finely incurving and handsome variety.

Dahlia Melody (Cactus).—A handsome variety coloured a heavy cream. These three were exhibited by Messrs. James Stredwick and Sons, St. Leonards.

Dahlia Lowfield Star.—This is another good addition to the new race of "Star" or Cosmea-flowered Dahlias, the rosy colour being of considerable warmth and much decorative merit. From Messrs. J. Cheal and Sons, Crawley.

Dahlia Barbara Purier (Pompon).—Quite of model shape, medium size and the purest white. From Messrs. Keynes, Williams and Co., Salisbury.

The above-mentioned Dahlias were adjudicated upon by a joint committee of the National Dahlia Society and the Royal Horticultural Society, and therefore carry the first-class certificate of the former and the award of merit of the latter.

We crave the indulgence of our readers and the exhibitors of the foregoing novelties for the colour descriptions given. The exhibits were seen under artificial light in the lower regions of the Great Central Hall, Westminster, the military having occupied the hall at Vincent Square; hence the colours were not seen to advantage. All the awards were made on the 22nd ult.



FINISHED TRUG OR GARDEN BASKETS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Early Permanent Vines.—If ripe Grapes are expected in May, it will be necessary to prune and prepare the Vines with as little delay as possible, so that the house may be shut up and the Vines started gently by the first week in November. In pruning old Vines it is not advisable to cut the wood too hard back, but to be guided by the state of the buds, leaving three or more eyes when necessary in order to make certain of a crop. Although the Vines may not look so neat when treated in this way, one cannot afford to sacrifice a crop for the sake of appearance. After pruning has been carefully performed, all loose bark should be removed and the Vines washed with soft soapy water, but carefully avoid bruising the buds. If mealy bug is present, the trellis and walls may be carefully washed with paraffin. When this work is finished, the surface of the border ought to be lightly pricked up and the surface soil removed to make room for a top-dressing of new soil, which may be mixed with old lime rubble and finely crushed bones. No water need be applied for the present, but, when forcing commences, the border should be examined and, if necessary, a good soaking of clear soft water applied.

Early Pot Vines.—If very early Grapes are desired, pot Vines may be forced in preference to permanent Vines, as they can be subjected to more heat than it is prudent to apply to Vines which have taken several years to bring to a fit state for extra early forcing. These should be cut to the required length at once and placed in an exposed position until the time arrives for forcing.

Melons.—Plants which are swelling their fruits will require careful attention with regard to watering and ventilating. Some stimulant may be applied in the form of artificial manure, lightly sprinkled over the bed, previous to watering with clear soft water. Ventilate freely when the weather permits, and leave a little air on during the night, with sufficient fire-heat to keep the temperature at 75°.

Plants Under Glass.

Mignonette.—Another sowing may be made now in 4-inch pots, which should be well drained. Rich loam and sifted lime rubble will suit the purpose well, and should be made tight in the pots previous to sowing the seeds. Young plants from previously sown seed may be thinned to four plants in a 5-inch pot. Place small Bamboo twigs to keep them in an upright position, and grow them quite near the roof glass in a well-ventilated greenhouse and fully exposed to the sun.

Cyclamen.—Seeds may now be sown with a view to producing young plants for flowering next season. The soil should consist of loam and leaf-mould in equal parts, and ought to be mixed with sufficient silver sand to keep it from becoming sour. Sow the seeds thinly and press well into the soil. Afterwards cover lightly with fine soil. Cyclamen plants for winter flowering are now well rooted, and will benefit by light top-dressings of artificial manure. Clay's Fertilizer mixed with fine sifted soil suits them well as a top-dressing. Very little shading will be necessary now, but the ventilators should be freely opened when external conditions are favourable.

Calceolarias.—Plants in small pots should now be transferred to their flowering pots. Protect from sun and keep the pit closed until they become re-established, after which air should be given in sufficient quantity to keep them from becoming drawn. Fumigate the pit as it becomes necessary for the destruction of insects.

The Flower Garden.

Delphiniums.—In cases where these plants have become too large and the soil exhausted, the present is a suitable time to divide them and make new plantations. Those which flowered early and were cut down a few weeks ago will be making numerous young growths and roots, which will soon take hold of the new soil which has been prepared for them. In making bold

clumps of Delphiniums, overcrowding should be avoided, as this is detrimental to the constitution of the plants.

The Rose Garden.

Climbing Roses.—The present is a suitable time to remove old flowering stems in order to make room for young, healthy shoots to flower next season. A space of 8 inches should be allowed between strong young shoots, as overcrowding is almost sure to produce red spider and other pests during the summer.

The Rock Garden.

Increasing Plants.—The dripping weather experienced during the last few weeks will have caused many of the plants which have been cut over to make fresh growths. In many cases these new shoots may be used as cuttings, for it is not too late to increase the stock of young plants which may be necessary to fill vacancies in the spring. Aubrietias, Arabis, Dianthi and Phloxes will all make roots if inserted in small pots of sandy soil and placed in a close frame or under a bell-glass. Campanulas may also be increased by division now. The alpine species have obvious advantages for all kinds of rock gardens, and are, as a rule, easily cultivated and increased by division or by seeds, as well as by cuttings in the spring. Keep the rock garden quite free from weeds by the frequent use of a small hoe or fork. Cut over any overgrown specimens, so that they may not interfere with the development of choicer subjects.

The Kitchen Garden.

Carrots.—The main crop of Carrots should be lifted and stored as soon as possible. A cool, frost-proof shed will suit the purpose well for roots which are required for use during the winter. Later sowings may still be allowed to remain in the open, and the last sowing, which is generally made here in July, may be left in the ground throughout the winter, a covering of rough leaf-soil being applied if sharp frost sets in.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Seakale.—In many districts Seakale will have completed its growth, and where early forcing has to be carried out, a number of plants should have the decaying growth stripped off to allow the crowns to be thoroughly ripened. On the first appearance of frost, throw out these roots, and let them remain on the surface for a time, as crowns which have been exposed to frost will force more readily than those that have not. For general forcing purposes the end of the month will be quite soon enough to make a start.

Chicory.—A few roots of this useful salad may now be lifted and prepared for forcing. Cut the foliage over near the crown, and arrange the roots in large pots or boxes. These may be placed in a Mushroom shed or any convenient place where they can be kept perfectly dark, and where a moderate heat can be maintained. Very little water will be required at the outset.

Lettuces.—Young plants growing outside should now be carefully lifted and planted in small pits or cold frames. It is important to remember that these must have ample ventilation at all times, but not subjected to over-much moisture. If the lights were tilted up back and front, a constant circulation could be maintained.

Mustard and Cress.—To keep up a constant supply, all sowings from this date should be made under glass. For the purpose it is only necessary to use light and very shallow boxes. Sowings, of course, should be made to meet the demands of the establishment.

The Flower Garden.

Pæonies.—Where, from exhaustion or other causes, these plants require to be moved, no time ought to be lost in getting to work, as it should be remembered that they start into growth quite early in the spring. If a border is to be devoted to them, the ground must be deeply trenched,

adding some well-decayed manure as the work proceeds. The moving of the plants should be carried out with the utmost care, as there are perhaps very few plants that resent interference at the roots more than Pæonies.

Delphiniums.—Like the foregoing, where these have to be moved there is no better time to do this than the present, although it must be admitted they are not so impatient in this respect as Pæonies. Delphiniums are, perhaps, more largely grown to-day than they were, and with the many fine varieties now to select from, they will amply repay any little extra care and attention. Recently I saw some large informal beds planted by a stream, and the effect was very striking indeed. The earlier flower-spikes had been cut over, and in the first week of September they were still in bloom.

Begonias.—Tuberous-rooted Begonias should be lifted before they have been actually cut down by frost, and dried off gradually by placing them in an open shed. Allow them to remain there until the foliage falls off, when they should be packed in sand and stored in some frostproof building. Be careful to keep each variety by itself; otherwise great confusion will result in the spring.

Wallflowers.—As soon as the summer bedding plants are cleared, these may be planted in beds or borders, as even planted alone they make quite a good spring display. A very simple and inexpensive arrangement is to plant Narcissus Poeticus ornatus among some dark-flowered Wallflowers. This makes a particularly striking spring display.

Plants Under Glass.

Liliums.—Many of the Liliums, chiefly of the Harrisii type, come to hand about this period, and no time should be lost in having them potted up on their arrival. A suitable compost for these is some good loam, leaf-mould and sand. Place the bulbs well down in the pots to enable them to be top-dressed later. Plunge them in a frame, and if the soil was sufficiently moist when potted, no water should be required until they have made some growth.

Gladioli.—The early flowering varieties, so useful for pot culture in the North, such as Blushing Bride, Peach Blossom and Fire King, should now be potted up into 5-inch or 6-inch pots, using a compost of loam, leaf-soil and a little well-rotted manure. After potting, stand them in a frame that is frostproof, and apply no water until they have made a little growth. On no account attempt to force them, which in most cases would end in failure; they must be allowed to come on naturally.

Bouvardias.—Most of these will now be growing freely and showing the flower-buds. At this stage they will be greatly benefited by an occasional application of manure-water. This, of course, must be given with caution. Be careful not to put too many stakes to the plants, which would not only damage the roots, but also render them unsightly.

Hardy Fruit.

Gooseberries.—Where the bushes have been infested with insect pests, they should be sprayed with one or other of the many insecticides now on the market. Do this as soon as the leaves have fallen. Clear away all loose soil and leaves from round the stem, which is sure to contain hosts of insects, and give the ground a good dusting of hot lime; and no harm will result from dusting the bushes as well.

Fruit Under Glass.

Peaches.—The foliage on most of the earlier varieties will now be ripening, but all attempts at stripping the trees of foliage prematurely should be avoided. Unfortunately, Peach houses, and even vineries, have to be utilised for housing Chrysanthemums and other plants, and, to enable these to get sufficient light, the trees are very often shorn of their leaves before they are ripe. Boards must be placed on the borders to stand pots on, and on dull and wet days it may be necessary to turn on a little fire-heat to dry up the moisture. In such cases the ventilators must be kept open to prevent, in the first instance, any undue excitement of the Peach buds, and also to prevent mildew attacking the plants.

JOHN HIGGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

THE ROCK GARDEN IN LATE SEPTEMBER.

ALTHOUGH late September is not exactly the period when one would expect to find many plants flowering in the rock garden, it is a time when too often this home of alpine and other dwarf vegetation is quite destitute of blossom. This bareness could, to some extent, be overcome were a little forethought exercised at planting-time, as there are quite a number of plants which, although perhaps not strictly natives of mountainous regions, may, nevertheless, be used in the rock garden, and which will give us flowers at this late date.

The following list, compiled while looking through the rock garden at Kew a few days ago, may prove useful to those who desire flowers at so late a season: *Erigeron mucronatus*, low and spreading, with flowers resembling those of field Daisy; *Colchicum cilicicum*, rosy purple; *C. speciosum*, larger, much the same colour; *Convolvulus mauritanicus*, trailing, with deep lavender blue flowers; *Sedum spectabile*, rose-coloured blooms, planted high up on rocks to render it dwarf; *Centaurea montana*, deep blue, 1 foot high; *Senecio Saxifraga*, low trailing, Campanula-like habit, with numerous, small, bright yellow, star-shaped blossoms; *Campanula portenschlagiana*, second display of deep blue flowers; and *Hypericum olympicum*, a trailing St. John's Wort with slightly glaucous foliage and large, bright yellow blossoms, the long filaments of which make a striking central boss.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THE fortnightly meeting of the society held on September 22 was in the nature of a novelty. Owing to the military having commandeered the society's hall at Vincent Square, the Council at the last moment was compelled to make arrangements for the exhibition at the Great Central Hall, Westminster, of which only the lower regions were available. Amid these new surroundings quite a creditable exhibition was brought together, and in conjunction with the annual display of vegetables excited much interest. The holding of an exhibition of fruits, flowers and vegetables in a cellar presented these things in an entirely new light—some, indeed, in little light at all—and while the conditions did not savour of the ideal, and it was impossible to decide as to the colours of certain flowers, both Fellows and exhibitors alike owe the Council not a little thanks for, in the circumstances, providing an exhibition at all.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. C. T. Druery, E. A. Bowles, J. T. Bennett-Poë, J. Green, G. Reuthe, J. F. McLeod, A. Turner, J. W. Moorman, J. Jennings, W. Howe, F. W. Harvey, J. Dickson, H. J. Jones, C. Dixon, W. Bain, C. E. Pearson, W. P. Thomson, E. H. Jenkins, G. Paul and W. H. Morter.

Mr. L. R. Russell, Richmond, displayed an excellent table of stove and greenhouse plants, such fine-leaved subjects as *Dracenas*, *Marantas*, *Caladiums* and *Crotons* playing a prominent part. *Dracena Victoriana* in well-furnished, well-coloured examples were very good, as were also *Alocasias*, *Acalypha hispida* and others.

Mr. C. Engelmann, Saffron Walden, arranged very good groups of Perpetual-flowering *Carnations* *Carola*, *Pioneer*, *Scarlet Carola*, *Gorgeous*, *Circe* (a fancy), *Sunstar* (yellow), *Marmion* and *Variegated Carola*. *White Wonder* and *White Enchantress* were also shown.

Messrs. H. B. May and Sons, Edmonton, showed a miscellaneous group of greenhouse flowering plants and Ferns centred by a well-grown, well-flowered group of *Bouvardias*, of which *Maiden's Blush*, *Dazzler* and *candidissima* were the chief. *Princess of Wales* and *Priory Beauty* were very fine among the blush pink flowered sorts.

Messrs. W. and J. Brown, Stamford and Peterborough, displayed excellent *Roses*, of which *Duchess of Wellington*, *Lady Hillingdon*, Mrs. H. Stevens (white), *La Tosca*, *Rayon d'Or* and *General Macarthur* were a few. These were set in vases and stands, and with masses of *Jessie* made a very showy exhibit.

Messrs. B. R. Cant and Sons, Colchester, also showed an excellent group of *Roses*, the stands of *Irish Elegance*, *Rayon d'Or*, *Lady Hillingdon*, *Gottfried Keller*, *General*

Macarthur, *Louise Catherine Breshan*, *Juliet* and *Mme. Abel Chatenay* being very fine. *Sunburst*, too, was also of high merit.

Mr. J. B. Riding, Chingford, Essex, filled a table with an admirable lot of *Dahlias*, comprising *Cactus*, *Collarette*, fancy, single and decorative sorts. *Ideal* (crimson and white), *V. de Schildt* (pink and white), *Baron Rothschild* and *General de Sonis* (scarlet) were among the best of the *Collarette* section. *Pink Gem*, *Loveliness* and *Carrie* were good among decorative sorts. *H. Witte* is a very fine pure white.

Miss C. M. Dixon, Edenbridge, showed *Michaelmas Daisies* and early flowering *Chrysanthemums* in variety. *Carrie* and *Perle Chatillonnaise* among the latter were very good.

Mr. G. Reuthe, Keston, Kent, displayed *Michaelmas Daisies*, *Colchicums*, *Desfontainia spinosa*, *Saxifraga mandschuriensis*, *Stokesia cyanea*, *Lobelia Queen Victoria* and *Phygellus capensis*.

Messrs. H. J. Jones, Lewisham, showed an excellent lot of *Michaelmas Daisies*, of which *multiflora* (white), *vimineus* (lovely pink), *ericoides* *Perfection* (white), Mrs. Frank Penn (rose), *ericoides* *Delight* and *vimineus* *Golden Rain* were the most charming.

Mr. Ernest Ballard, Colwall, near Malvern, showed many fine seedling *Michaelmas Daisies*, of which *Lady Lloyd* (magenta pink), *Edith Goodwin* (fine blue), *Cloudy Blue* (mauve blue), *Nancy Ballard* (rose), *Jupiter* (pale lavender), *Pleiades* (double white) and *Mira* were some of the best in a really choice lot.

Messrs. J. Carter and Co., Raynes Park, showed a fine bank of *Cactus Dahlias*, nicely arranged with sprays of *Asparagus*. *Pæony*-flowered varieties, with *Pompon*, single and decorative sorts, also added variety and beauty to this excellent group of plants.

Messrs. W. Wells and Co., Merstham, showed *Antirrhinum Nelrose* and *Carnation Champion* in fine condition.

Messrs. Carter Page and Co., London Wall, E.C., displayed a double table of *Dahlias*, of which the *Cactus* and *Collarette* sorts were the chief. *Leitstein* (crimson and white), *Prince John* (scarlet and white), *Inchcape* (dark maroon and white), *Grand Papa Charmet* (bright red and cream) and *Negreo* (maroon and white) were among the best.

Messrs. Joseph Cheal and Sons had an excellent exhibit of cut shrubs with *Dahlias*, the former including *Buddleia amplissima*, a great variety of *Ceanothus* and the white-flowered *Baccharis halimifolia*. *Tamarix hispida æstivalis* was also very fine.

Mr. W. Wells, jun., Merstham, showed some admirable groups of *Phloxes*, of which *Lady Satanella* (fiery red), *America* (pink), *Goliath* (reddish scarlet), *Arthur Ranee* (pink and white), *Africa* (carmine red), *Le Mahdi* and *Mme. A. Buchner* (white) were all good.

Messrs. T. S. Ware, Limited, Feltham, showed *Cactus* and other *Dahlias*, with *Aster Amellus Arethusa*, a very charming plant.

Mr. Amos Perry, Enfield, displayed *Aster Amellus* in variety, *Lilium Biondii*, *Liatris pycnostachya*, *Kniphofias*, *Salvia uliginosa* (fine blue), *Kniphofia Macowanii*, *Colchicum speciosum magnificum* (a fine red), *Senecio pulcher*, *Salvia Griegii* (rich scarlet) and *Pentstemon isophyllus* (rich orange scarlet) in an excellent group.

Mr. J. T. West, Brentwood, showed *Dahlias* of many sections, *Pompons*, singles, *Cactus*, *Pæony* and *Collarette*, all in great variety.

Messrs. Stuart Low and Co., Enfield, contributed a nice lot of *Statice imbricata*, *Chironia ixifera* and some excellent pots of *Nerine Fothergillii*, with *Ferns* and other plants.

FRUIT AND VEGETABLE COMMITTEE.

Present: A. H. Pearson, Esq. (chairman), and Messrs. Joseph Cheal, W. J. Jeffries, Owen Thomas, F. Perkins, W. Bates, H. J. Wright, W. Pope, A. Bullock, P. D. Tuckett, A. R. Allan, William Poupart, J. Davies, Jesse Willard, A. Grubb and E. Beckett.

The most important item before this committee was the gold medal collection of fruits from Mr. J. C. Allgrove, Middle Green, Langley, Slough, and apart from the intrinsic merits of the fruits, the exhibit was of interest in that it connects the old with the new. For many years Mr. Allgrove has managed for Messrs. Veitch the fruit tree department at Slough, which has now passed into his hands. Hence, in the future as in the past, there will be a continuance of those high-class fruits for which for years Messrs. Veitch have been so famous. The exhibit comprised 136 dishes, Apples, Pears, Plums, Figs, Nuts and ornamental Crabs being included. A feature of the group was a number of 2 feet high two year old trees of the new culinary Apple *Rev. W. Wilks*, some of which, lifted from the open and planted in 6-inch pots, were very attractive. One tree alone carried four handsome fruits, a veritable load for a plant of such tender age. The single fruits of the variety in boxes were of huge size, and in many instances also finely coloured. Needless to say, the whole of the fruits were of the finest description, and, occupying a full table length, were a great attraction. Of dessert Apples, Cox's Orange Pippin, American Mother, James Grieve, Rival, Wealthy, Ribston Pippin, Charles Ross, Lord Hindlip and a very fine dish of the new *St. Everard* were on view, among many; while of cooking sorts *Newton Wonder*, *Peasgood's Nonsuch*, *Bramley's Seedling*, *Warner's King*, *Lane's Prince Albert*, *Blenheim Orange* and *Annie Elizabeth* were those which appealed most strongly. Pears, too, were well represented, *Doyenné du Comice*, *Souvenir du Congrès*, *Durondeau*, *Marguerite Marillat*, *Beurré Hardy*, *Louise Bonne* of Jersey, with *Pitmaston Duchess*, being the finer of these. Of *Beurré de Mortillet* there was a grand dish, one giant fruit turning the scale at 27oz. Plums were seen in *Coe's Violet*, *Golden Drop* and *Grand Duke*. While the fruits were of the

highest excellence throughout, they were also admirably displayed, the exhibit meriting the high award granted.

A capital exhibit of high-class fruits, packed for market, was shown in boxes by the Guildford Fruit Farm Company, Guildford. These were contained in the bushel Federated Standard fruit boxes, and averaged 38lb. to 42lb. of fruits. Some twenty-two boxes were exhibited in four varieties, viz., Cox's Orange, Allington Pippin, Newton Wonder and Lane's Prince Albert, a primary object being that of demonstrating the superiority of British-grown fruits when carefully graded and rightly packed.

From Messrs. Dickson and Robinson, Manchester, came a magnificent exhibit of *Onion Premier*, some eighty giant bulbs in superb condition being attractively shown. For size, solidity and rotundity it is hardly possible to conceive anything finer, while the uniform character of the bulbs suggested that all might have come from a single mould. Surely no better evidence of high-class cultivation in this prized and valuable article of food could be desired. An interesting item in the exhibit was a three-podded bunch of the Chinese Runner Bean (*Vigna sinensis*), each of the roundish pods of which exceeded 30in. in length. They were of an exceedingly flexible character.

A miscellaneous exhibit of vegetables came from David Vigo, Esq., Ducketts, Essex, and received a silver Banksian medal.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), Sir Harry J. Veitch, and Messrs. J. O'Brien, F. J. Hanbury, F. Sander, W. Cobb, R. G. Thwaites, J. Charlesworth, T. Armstrong, W. H. Hatcher, C. H. Curtis, A. Dye, E. H. Davidson, S. W. Flory, Gurney Wilson, W. Wotton and J. Wilson Potter.

In a compact group Messrs. Stuart Low and Co., Bush Hill Park, displayed *Cattleya hardyana alba*, *Brasso-Cattleya Maroniae*, *Lælia crispa*, *Cattleya gaskelliana alba*, *C. g. Milady* and the richly coloured *Lælio-Cattleya luminosa*.

Messrs. Charlesworth and Co., Hayward's Heath, had choice plants of *Cattleya labiata Arestor*, *C. Antiope* (deep crimson with sulphur yellow sepals), *Habenaria Susiana* (white), *Paphinia cristata*, *Odontodia Brewii* (very dark coloured) and some choice *Sophro-Cattleyas*, among others. *Zygocalyx Charlesworthii* was also noted.

In the group from Messrs. Hassall and Co., Southgate, N., *Cattleya Loddigesii alba*, *C. Beatrice* and the heavily fringed *Brasso-Cattleya Maroniae* were some of the choicer things.

Messrs. J. and A. McBean, Cooksbridge, showed nicely flowered examples of *Cattleya Harrisonii alba*, *C. Prince Edward*, *Odontodia Bradshawiae* and *Peristeria elata* in a compact little lot.

From Mr. H. T. Pitt, Rosslyn, Stamford Hill, came *Cattleyas*, *Cypripediums* and *Odontoglossums*, with examples of *Dendrobium Phalaenopsis* in variety.

Mr. R. G. Thwaites, Streatham, showed *Miltonias*, *Lælias* and *Odontodas* in some variety.

Messrs. Sander and Sons, St. Albans, had the white *Cattleya Mulleri*, some choice *Odontoglossums* and *Odontodas*, the pretty white-flowered *Oncidium incurvum*, *Cypripedium Franconia superba*, together with *Cattleya Iris*, *C. Adula* var. *Exquisita* and *C. Maronii*. The old and useful *Odontoglossum grande* was well shown.

EXHIBITION OF VEGETABLES.

The annual exhibition of vegetables, held on the 22nd ult. in conjunction with the fortnightly meeting, must be considered a distinct success, both from the quality and quantity of the exhibits. In every class there was considerable competition, and in not a few instances keenness also. In Class 1, for the best twelve kinds, distinct, the Hon. Vicary Gibbs, Elstree, Herts (gardener, Mr. E. Beckett), was in the place of honour with an admirable group, showing in his masterly style *Ailsa Craig Onion*, *Sutton's Prize-taker Bean*, *Tender* and *True Parsnip* (the roots being clean and fully 3 feet long), *Sutton's Perfection Tomato*, *Perfection Brussels Sprouts* and *Windsor Castle Potato* as his best dishes, the whole bedded and garnished with *Parsley*. Mr. T. Jones, Ruabon, was second, having excellent dishes of *International Leek* and *Ailsa Craig Onion* in a well-grown lot. The premier award in this class was the Sutton Challenge Cup, value £21, and £10 in money; second prize, £5. We believe the challenge cup was awarded to the second prize group, since an exhibitor may only win the cup once in three years.

For a collection of nine distinct kinds, Lord North, Wroxton Abbey, Oxon, took the first prize and silver cup for a superb collection of *Runner Bean Sutton's Scarlet*, *Dwarf Gem Brussels Sprouts*, *Best of All Tomato*, *Veitch's Autumn Giant Cauliflower* and *Sutton's Dover Castle Potato*. Second, the Rev. J. McMurdie, Woburn Park, Weybridge, who showed excellent *Beet*, *Wordsley Pride Potato*, *Autumn Giant Cauliflower*, *Celery* and *Pea Autocrat*. There were five collections staged.

For a collection of six distinct kinds, the Rev. J. Davies, Crowlee Vicarage, Worcester, was in the leading place against three competitors with a collection bordering on perfection. His *Invincible Carrots* were worthy of the name, clean, large and of the finest description. *Tender* and *True Parsnips*, *Lyon Leek*, *Premier Onion* and *Money-maker Tomato* (a grand dish) were other important dishes in a good all-round lot. Mr. W. Keep, Reading, was second.

For a collection of twelve distinct varieties of Potatoes, Mr. A. G. Gentle, gardener to Mrs. E. H. Denison, Little Gaddesden, Berkhamsted, was first with a magnificent lot, having *Snowball*, *Royalty*, *Long Keeping*, *Goldfinder*, *Purple Emperor*, *King Edward VII.*, *Windsor Castle*, *Mr. Bresse*, *Herd Laddie*, *Reid's Seedling* and *Excelsior*. Mr. G. Thorn, Willesborough, Ashford, was second. There were four competitors.

THE GARDEN.

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OCTOBER 10, 1914.

NOTES OF THE WEEK.

Why we Should Plant Roses.—Following our usual custom at the commencement of the Rose planting season, we are devoting this issue to articles on our national flower. With the shadow of a great European war hanging over us, we feel how necessary it is to urge upon our readers the desirability of taking an even greater interest in their gardens than they have done in the past. There can be no more peaceful refuge from the horrible stories inseparably connected with war than a well-designed garden, and few flowers are capable of giving so much real enjoyment over so long a period as the modern varieties of the Rose. Nurserymen have during the past year spent large sums in raising stocks of Roses for planting during this autumn and winter, and we feel it our duty at the present moment to urge upon our readers the necessity of taking long views. We are all hoping that the war may be over before the spring, and, unless Roses are planted now, the garden will suffer when Peace is declared. By freely planting now our readers will achieve a three-fold purpose: (1) Relief from the horrors of the war, (2) an improved garden when the present strife is over, and (3) the providing of work for members of a most deserving industry.

Digging Vacant Ground.—Now that the ground is cleared of most of the summer crops, the plot should first be cleared of weeds and rubbish, and, if the soil permits, manure wheeled on and digging proceeded with. There are many who object to this autumn digging, and, where the soil is of a light nature, there may be something to be said for their objection. Where, however, the soil is inclined to be the least heavy, it is just as well to have it turned up as early as possible, so that it may be exposed to the frost. In most well-regulated gardens a certain amount of trenching is done each year. This should also be proceeded with at once.

A Pretty Flower-Bed.—Where what used to be known to all visitors and inhabitants of New Brighton as "Ham and Egg Terrace," there is now a nice green lawn which is relieved by some well-thought-out beds in summer. One which was very pleasing this year consisted of small dwarf standards of a red and white double Fuchsia, which, an under-gardener told us, was called

Eckford, with an undergrowth of a free-flowering Viola somewhat after the style of Kitty Bell. The bed is an oblong, and to relieve the flat look which might be caused if the little standards were all the same height, three in the central line were taller than the others. We did not take any measurements at the time, but from memory we would put the majority down as about two and a-half feet high and the taller ones twelve inches more.

Rose William Allen Richardson.—Among those Roses that may fairly be classed as old varieties, it would be difficult to find one that is a more general favourite than this Noisette. Introduced as long ago as 1878, its deep orange

find a place in all gardens, however small. The annual varieties are very useful, although not to the extent of *S. latifolia*. If required for winter decoration in a dry state, the sprays should be cut when the flowers are at their best, and hung upside down in a dry place.

Sweet Lavender.—There seems to be an increased demand for this aromatic plant with its agreeable fragrance; indeed, many Lavender hedges seen lately seemed particularly effective. To increase the stock a batch of cuttings may now be inserted in cold frames. Although they appear to root somewhat slowly, these cuttings will make nice flowering plants by next season. Rosemary may be treated in exactly the same way.

A Good Autumn Rose.

Although the Hybrid Tea Rose Betty is useless for exhibition purposes, it is a charming variety in the garden. This autumn we have been particularly charmed with its long, conical blooms, and at the time of writing (the last day of September) it is still giving us sheaves of its delightful flowers. In colour these are coppery rose, shaded yellow, and possess the additional advantage of being fragrant. Its habit is vigorous and erect, resembling Mme. Abel Chatenay in this respect, and it is possible that the older variety may have been one of the parents of Betty. So far as our experience goes, the Rose under notice is not subject to mildew or other diseases. It was raised by Messrs. A. Dickson and Sons, and sent out in 1905.

The Conservatory in October.

Let the conservatory be kept as clean and attractive as

possible by the introduction of fresh batches of plants, such as early flowering Chrysanthemums grown in small pots for this purpose. *Salvia splendens* in pots is flowering freely in the open, and should be placed in the conservatory as it becomes necessary. Plants of *Lilium speciosum* which have been grown under cool conditions will also prove useful at this season. Cannas which have been grown in pots may be retained in the conservatory for some time longer. Their foliage is very ornamental, and if the old flowers are picked off, the foliage will lend a pleasing effect to the surroundings. All these plants will benefit by a little artificial manure, and for this purpose guano is one of the best.

The Great Sea Lavender.—*Statice latifolia* and its kindred varieties are among some of our best autumn-flowering perennials, and their value for decorative purposes in the fresh and in the dried state is not sufficiently known. They are of easy cultivation, thriving in almost any kind of soil or position, and should therefore



A LARGE STANDARD OF ROSE WILLIAM ALLEN RICHARDSON.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Clematis Spooneri.—This novelty was introduced by Mr. Wilson, the celebrated Chinese explorer, from whom we received seeds in 1911. It is undoubtedly by far the finest of all the early flowering Clematises, and superior in every way to any other species that flowers in the spring. *C. Spooneri* is a strong-growing species, suitable for covering a house, rough fence, or other structure. The plant is perfectly hardy, and after being planted in a cold, bleak position, flowered well the following season. It bears a profusion of

manure—sheep, cow, horse, not much chicken—1lb. of charcoal in powdered form, and two large spoonfuls of Clay's Fertilizer early in the spring and again when in bloom. It is remarkable what good effects result from using Clay's Fertilizer for other small flowers. I may add, in conclusion, I never let my Roses want for water. Within view of here is St. Paul's Cathedral, and I often think how very odd was the advice given to me when I purchased my first Rose tree. A gardener said it would be useless to try to grow Roses in this locality!—G. R. BUTTON, 4, Worsley Road, Hampstead Heath.

Mixed Arrangement of Hardy Flowers.—Now that we are all thinking about arrangements for another year, I would like to put forward a



A WEEPING STANDARD ROSE GROWING IN A GARDEN AT HAMPSTEAD HEATH.

pure white flowers, which are $2\frac{1}{2}$ inches across, perfectly round and of great thickness. They appear in May and last for several weeks. When better known this species will be a welcome change from the ordinary spring-flowering Clematises.—M. NICHOLLS, *The Gardens, St. Clere, Kemsing, near Sevenoaks, Kent.*

Fruits of Double-Flowered Peach.—I was not aware—nor, I think, are most people—that the fruit of the double-flowered Peach, *Prunus persica flore pleno*, is good to eat. My tree has never given its attention to fruit at all before, but this year it had three. They were nearly as large as, say, a Waterloo, and though not luscious or highly flavoured, they were quite good enough for dessert on Michaelmas Day. Can anyone tell me whether the bright green Pippin-like fruit of *Pyrus japonica* is edible? Mr. Weathers says not; but has anyone tried?—G. E. JEANS, *Shorwell Vicarage, Isle of Wight.* [The fruits of *Pyrus japonica* are not fit to eat in a raw state. They make excellent jelly, though some object to the flavour, and one or two may be added to Apple tarts if desired. They are certainly wholesome.—ED.]

A Good Weeping Standard Rose.—The head of the Rose illustrated on this page measures 9 feet across and the plant is 8 feet high. It was purchased from Messrs. Cutbush and Sons of Highgate, and has been brought to its present condition by following instructions given in *THE GARDEN*. Its food consists of

plea for mixed flowers. For a long time we have been massing and grouping *ad nauseam*, and it would be a change to have a few examples of a less severe colour style. I had several during the past season, and they have proved quite satisfactory. Especially valuable, I am sure, would this style be for isolated beds or small borders, and for small gardens where variety is very important. All kinds of flowers, annuals, perennials, hardy and tender, may be used. One little bed which has been extremely pretty was planted with tuberous Begonias, yellow and salmon pink in equal numbers, with clear blue Lobelia intermixed and a narrow band of variegated Ice Plant round all. This would have been still prettier with a few Snapdragons of a proper colour intermixed. Another scheme was composed of a mixture of *Dactylis elegantissima*, *Veronica Andersonii* variegata, red Begonias and *Nepeta Mussinii* kept regularly reduced to proper proportions, with Lobelia and variegated Anthemis as a border. The effect of this was very pleasing, the Begonia giving it the touch that saved it from insipidity. A long border partially grouped with such things as Gazania, Heliotrope, Lobel's Catchfly, double Godetia Schaminii, &c., had running through them single pink and mauve Asters, tall yellow Snapdragons, standard red Fuchsias and *Veronica Andersonii*. I have adopted the same principle to some extent in mixed borders, such plants as Francoa, *Gilia coronopifolia*, Gladioli, Antirrhinums, Lilliums, Montbretias, Lobelias of

the cardinalis type, Sweet Williams, Celcias, Phloxes and Japanese Anemones, with a lot of dwarfer-growing material, being suitable. Quite a number of plants having flowers of the same shade may be associated, with the best results, the point aimed at being dissimilarity of form rather than of colour.—R. P. BROTHERSTON.

When to Plant Tulips.—I fully agree with Mr. John Dunn that Darwin and other late-flowering Tulips should be planted in September. Our practice here at Lowdham is to begin planting late Tulips as soon as the Daffodils are all in, which is generally about the first week in September. I have never seen any ill results from early planting, but, on the other hand, have often noticed that the late-planted bulbs were inferior to the early planted ones, both as regards foliage and size of blooms. I very much doubt if "fire" is caused by early planting, or, rather, that early planted bulbs are more subject to it than those put in later. "Fire" is, I think, just a matter of climatic conditions. With us it always seems to follow sharp frosts or hail, followed by rain. The frost or hail alone will not do the damage, but, when followed by warm rain and close weather, "fire" often spreads very rapidly and does much damage. May-flowering Tulips nearly all start to grow in the dry state sooner than do the bedding varieties, which looks as if they needed planting earlier. Then, again, the soil is in so much better condition in September than it is in November. In the case of a strong, retentive soil such as we have here, it is often impossible to plant bulbs as they should be planted when the work is deferred until November. One of the largest of the Dutch growers told me some years ago that he always planted his Darwins before his bedding varieties. This did not influence me, for I had previously planted early, but it was a comfort to know that I was backed in my opinion by a good man. It is quite possible that bedding Tulips might with advantage be planted earlier than they generally are, but every gardener knows the difficulty of getting his beds and borders ready for them. At the present time many beds and borders are as gay as ever they were in July or August; and who could have the heart to destroy the present display for the sake of a possible improvement in the Tulips next spring?—J. DUNCAN PEARSON, *The Nurseries, Lowdham, Notts.*

—The letter of "Observer (Weybridge)" on this subject in *THE GARDEN* of September 26, page 471, reminds me of an unusual experience I had in Tulip culture a good many years ago. The stock had all been planted—so I thought—during October or November. To my consternation, however, when sorting out the newly arrived seeds early the following February, I came upon a parcel of early Tulip Keizerskroon, or, as I now prefer to designate it, Grand Duke. I decided, to give them a chance, and planted them alongside another batch of the same variety which had been planted for cutting purposes, and closely watched their development. They appeared above the ground about a week later than the earlier-planted batch, and the blooms opened correspondingly late, but beyond this there was no visible difference between the two lots. I only record this experience to show that one may take considerable liberties with the Tulip.—CHARLES COMFORT. [It would be interesting to know how the late planted bulbs behaved the following year.—ED.]

PREPARING LAND FOR NEW ROSE BEDS.

MANY readers who have followed our advice in past years and have thoroughly prepared the soil of their gardens before planting Roses have been loud in their praises of the hints thus afforded; but as *THE GARDEN* is constantly enlisting new readers, it has been thought advisable to repeat such information as will be helpful just now when, as we hope, many are contemplating new plantings of our national flower. The delightful freedom of flowering of our modern Roses when planted in well-prepared soil gives to them undoubted pre-eminence among the denizens of our gardens. We may rightly value the thousand-and-one other subjects, but where can we obtain such a constant blooming from the end of May until the frosts of November excepting from the lovely Hybrid Tea, Tea, Monthly and Polyantha Roses?

As I have already hinted, to keep up this continuity of blooming the plants must be kept ever growing. I have seen beds of Tea Roses that after their first blow in June have been in an almost stationary condition owing to the want of proper preparation of the soil. If there is a good depth for the roots of the Roses to obtain fresh food, their very natural propensity to produce new shoots will be considerably assisted. Therefore I would urge upon all readers who contemplate planting Roses this autumn to start as early as possible and trench the soil.

Unsuitable Soil.—It is of little assistance to tell readers what soil is best for Roses, for as a rule they have to make the best of what is available. Many possess the idea that Roses must have clay, but while granting that clay is desirable, it is not indispensable. To anyone possessing a light soil that is inclined to be sandy, with a gravel subsoil, I would say, see that the Roses have a depth of 3 feet of the best soil available, removing the gravel if necessary to secure this. Into the lower 2 feet incorporate plenty of cow and pig manure. This is worth some amount of trouble to procure, and is far better than strawy stable manure that one must too frequently have resort to. If it is practicable to import a cartload or two of heavier soil, do so by all means.

Heavy Soil.—On the other hand, those possessing a heavy subsoil of clay should take care that this is well broken up by adding burnt earth, which may often be procured from a brickfield, or some road grit, other than from tarred roads, or, failing this, some agricultural chalk. There must be no water-logged soil if our Roses are to do well, but, so long as water will pass away freely, the subsoil may be of a very heavy nature, and the Roses revel in it. I have the true Tea Roses, such as Mrs. Myles Kennedy and Lady Roberts, growing in soil the lower stratum of which would make good bricks, and all that I have added has been burnt earth and some pond mud. Ordinary town ashes are a good material to improve a heavy subsoil, but we may make our own burnt earth by means of a sack or two of coal dust, some faggots and some clay soil to burn.

Trenching the Beds or Borders is carried out as follows: Mark out a section of 3 feet in width at one end of the bed. Remove the top 12 inches of soil to where the work will finish.

Now thoroughly break up the next 18 inches or 24 inches of soil and incorporate the ingredients named. I also advise giving 6oz. of basic slag to a square yard. Having done this, start another section and dig the top foot of soil on to section No. 1. If it is turf being dealt with, a thin layer of the grass should be skimmed off and burnt, or else put into the bottom of the trench with the grass downwards. If

Isolated Positions are to be planted with one or more Roses, these also should be prepared on the same lines, and for ramblers on arches and pillars or climbers against walls or fences I would advise holes being dug 3 feet wide each way and the same in depth. I once knew a gardener who had a millionaire employer. He thought he would go one better than other people, and so for every pillar Rose he planted he had a cartload of new compost put into big holes. But what a grand result followed! I was astounded to find the plants at the top of 10-feet to 12-feet Larch poles in a very short time, certainly not more than two years. They were not only at the top, because this can be accomplished in one

ROSES THAT LAST WELL.

IT is natural that the national flower should be the most popular of all the many flowers largely grown in this country, for the same varieties that are grown massed in beds in the large Rose gardens of the wealthy may also be grown in the mixed beds of the suburban garden or the plot of ground cultivated by the cottager. To the extraordinary development and improvement in the habit and colour of the Rose must be given much of the credit for its popularity; but there are yet other achievements to be attained, and the keen lover of the Rose is on the look-out for them and welcomes them with open arms, quickly making room for them in his already well-filled garden; and just as the single Roses were welcomed yesterday, so to-day and to-morrow the Roses which last both on the plant and in a cut state take the premier position. The Roses of gorgeous colours are, alas! too often those which one must be an early riser to see in all their beauty, for the



THE BOWL OF ROSE DOLLY VARDEN SHOWN BY MESSRS. GEORGE PAUL AND SONS AT THE NATIONAL ROSE SOCIETY'S SHOW LAST JULY, WHEN IT RECEIVED AN AWARD OF MERIT. IT IS A HYBRID RUGOSA, AND THE SEMI-DOUBLE FLOWERS ARE GLOWING APRICOT SALMON PINK IN COLOUR.

year, but they had thickened out so wonderfully. By taking these precautions and seeing to it that the land is prepared about three weeks before planting, success is assured to the veriest tyro, providing always good sound, well-rooted plants are set out. I would also advise a stock of bone flour to be in readiness, so that each Rose may receive a handful at the time of planting; but see to it when planting that the manure is kept away from the roots. The bone-flour is scattered on the soil when the roots are covered and just before the final layer is added. W EASLEY

"thin" Roses so lovely in the bud are too soon full blown and too quickly gone. The long-lasting Roses are comparatively few in number, but they embrace practically all colours and shades, and afford a wealth of choice even to the most discriminate of choosers.

Foremost in the reds one must place *Château de Clos Vougeot*, darkest of all Roses, and a treat in store for those who have not grown it. Of rather horizontal growth, it should be pruned to an eye pointing upwards and inwards to correct this peculiar weakness. It will hang for days

on the plant, and revels in the hottest sun. There were few visitors to the shows this summer who did not notice how George Dickson lasted, even on the hottest days. Leslie Holland, Lieutenant Chaure, with Laurent Carle, are also good keepers; so, too, are the older but fine Roses Hugh Dickson and General Macarthur. Mme. Abel Chatenay revives when placed in water, even after it has wilted. Willowmere, Mme. Segond Weber, Lady Alice Stanley, Mrs. Alford, Mrs. John Laing, Mme. Maurice de Luze and Jonkheer J. L. Mock are prominent among salmons and pinks as Roses with thick, leathery, long-lasting petals. In pale pinks there are Prince de Bulgarie and its improvement, Mme. Rostand; Ophelia and Pharisæer. It seems only the other day that good yellow Roses were scarce; indeed, the ideal yellow Hybrid Tea did not exist. Thanks

Goodwin, and Louise C. Breslau, which is similar but of a deeper apricot shade; also M. Paul Lédé and its new sport Climbing Paul Lédé.

Among new Roses, the variety which has impressed me as a lasting Rose to an unusual degree is Mrs. Charles Russell, an American introduction. A Rose which so well withstands the sun of the United States may be expected to fall into the category which we have under consideration. The way this variety remained fresh all through the terrific heat which prevailed at the time of the Holland House Show was quite instructive. Flowers which were cut on the Monday lasted until the close of the show on Thursday evening. This Rose is of a pretty, non-clashing shade of old rose pink, has a good perfume, and is of vigorous, good habit. Altogether the study of Roses is perpetually interesting, but not least instructive

but can never be overtaken. But in the effort to reach it we have many beautiful experiences which those who are content with mediocrity can never know, so that no one has yet produced the ideal Rose of our imaginations, yet hybridists are yearly adding to our gardens Roses which, in one respect or another, do approach the ideal. It is hard to imagine a Rose of more perfect form than British Queen, of more glowing colour than Mme. Edouard Herriot, or of more delicious scent than H. E. Richardson, and all of these are of very recent introduction.

Possibly during the last ten years, which have seen the wonderful advance of the Hybrid Teas, the qualities of form, colour and floriferousness have been more highly esteemed than that of fragrance. But if this has been so, I think the tide has begun to turn. A special cup was offered last June at the Holland House Show for the Rose having the "true Old Damask scent," and at the National Rose Society's Show the judges of seedling Roses were instructed that "some importance is now attached to scent, which, though not always attainable, gives a Rose an added charm." This may, perhaps, be considered rather a mild way of describing what to many is the *sine qua non* of a good Rose; but it is, I believe, the first time that judges have been specially asked to consider fragrance as one of the "points" of a new Rose. Mrs. Bertram Walker, a variety of fine form and colour, had also the charm of fragrance, and if it proves to be of good hardy habit, will well deserve the gold medal which it was awarded.

Mrs. George Norwood, a beautifully shaped Rose of a clear soft pink, has a delicious scent, and should certainly be tried by anyone wanting a good new Rose. This Rose competed for the "Clay" Cup which was offered at Holland House for the variety not yet in commerce having in the most marked degree the real Damask Rose scent. Some seven or eight varieties were shown, and the cup was awarded to a Rose of Messrs. William Paul and Sons' appropriately called Queen of Fragrance. If there is anything in a name, it should do well. It was a large, rather flat, pink flower, flushed in the centre with bright blush pink, and, I imagine, like Mrs. George Norwood, belonged to the Hybrid Tea class. Though bright in colour and very fragrant, it was not nearly such a beautifully shaped Rose as Mrs. George Norwood. Messrs. Alexander Dickson and Sons showed a Rose called Mrs. Bryce Allen, which, though neither bright in colour nor good in shape, had a wonderful fragrance, and from it the diligent hybridist may evolve more beautiful and equally sweet-scented progeny. These varieties will, I hope, be offered for sale this autumn; but, naturally, they will still be expensive, and in the nature of experiments. I will now mention a few well-tried, though comparatively recent introductions. In looking through a list of Roses of the last five years, I have noted the following varieties as being specially fragrant:

Andre Gamon (1909, H.T.).—A fairly vigorous variety of deep carmine pink, good shape and real Rose scent.

Lady Alice Stanley (1909).—Very vigorous. If grown in too strong a soil, the flowers are apt to come coarse; but in a light soil and not overtaken they are well shaped, of very attractive colouring, coral rose on the outside of the petals and pale pink on the inside. The very pronounced scent is a mixture of Tea and Hybrid Perpetual. **WHITE LADY**

(To be continued.)



A BOWL OF ROSE CLIMBING SUNBURST, A GOOD "LASTING" VARIETY.

to Rose raisers, the position is now quite otherwise, and among many fine yellows Sunburst stands out as the best Rose to last in this or any other colour. The first crop of flowers of this variety come pale, almost white, but I have known blooms used in church vases to remain fresh for a week. There are not many Roses that would last in this way. The new climbing sport, Climbing Sunburst, is, of course, equally durable.

The white Roses are not numerous. Frau Karl Druschki is, of course, one of the best; but the new scented Druschki, Mrs. Andrew Carnegie, lasts equally well, and Molly Sharman Crawford in a lesser degree. Among Roses of other colours which outlast other sorts there is ample choice—Marquise de Sinety and the sort which may one day supplant it because of its superior habit, viz., Mme. Lutand; Juliet; that grand bedding coppery orange variety A. R.

is the extra amount of pleasure one may get by planting the Roses which last. **LADYBIRD.**

SOME RECENTLY INTRODUCED SWEET-SCENTED ROSES.

THEORETICALLY, all Roses should be sweet-scented, as they should all be of good form, perpetual habit, pure colour and perfect hardiness. But in a plant which has shown itself capable of such infinite variety that "custom can never stale" its charm, it would seem almost too much to expect that any one kind should combine in itself in a marked degree all these desirable qualities. The ideal in Roses, as in other matters, is not easily come by. Like the will-o'-the-wisp, it is always luring us on,

SOME OF THE NEWER ROSES SUITABLE FOR EXHIBITION.

FIND as each autumn arrives that amateurs are more desirous than ever of planting Roses that possess beautiful form and also substance, so that if necessary they can exhibit the blooms. And one is not at all surprised at this. Far too many novelties of the present day possess but three qualifications. They are most lovely in colour, with delightful buds, and make vigorous growth, but the full-blown flowers are little more than single. We are then bombarded with enquiries for full Roses—"a good full Rose"—and it is with the object of introducing such to the reader that this article is written. As the older varieties are well known, it will only be necessary for me to name the newer kinds, and I will do so briefly and in alphabetical order. There are several others I could name, but I prefer to give them another season's trial before pronouncing on their merits.

Alexander Hill Gray (T.), although not large, is, nevertheless, of such fine shape that it should find a place in every collection. I have been very pleased with it this year, and it throws up fine, strong basal growths crowned with grand blooms of a deep lemon colour.

Alice Lemon (H.T.) is a blush white variety of exquisite form and fulness. It is of American origin.

Annie Crawford (H.P.).—Those who saw this Rose at Bath when it obtained the National Rose Society's gold medal will not soon forget it. The boxful was one of the features of this fine show. The blooms are of wondrous size and splendid form; it is probably the largest Hybrid Perpetual grown. Maiden plants will grow to a height of 6 feet to 8 feet. If it is a free bloomer as a cut-back it will be most valuable. It struck me as being a superior Mrs. John Laing.

Augustus Hartmann (H.T.).—This has been exhibited so grandly by its raisers, Messrs. B. R. Cant and Sons, that I have no doubt as to its merits when in the hands of the skilled grower. The colour, geranium red, seems to be an advance on George C. Waud.

Aviateur Michel Mahieu (H.T.).—Decidedly good, coral red, with vivid centre. It has fine long buds, very distinct in colour, deepening as the season advances.

Candeur Lyonnaise.—Really an improved Frau Karl Druschki with a lemon tinge, and a much fuller flower. Perhaps in general appearance it is too much like its parent, and it will be difficult for judges to distinguish one from the other.

Colleen (H.T.).—As I saw it at Portadown this Rose was really wonderful. Its fine guard petals were a feature. The colour is brilliant rose pink.

Comte G. de Rochemur (H.T.).—A very neat flower of brilliant scarlet red. A good front-row flower and very free.

Coronation (H.P.).—An extraordinarily vigorous grower and a grand flower of the colour of Her

Majesty, with a more majestic form. Perhaps not free blooming enough for a garden Rose, but this I cannot say definitely until after another year's trial.

Countess of Clanwilliam (H.T.).—Delicate peach, flamed cherry red. I thought this the best novelty I had seen when visiting Belmont last year, and I would advise all exhibitors to get it.

Countess of Shaftesbury (H.T.).—Exquisitely lovely in the bud and when half open. Rather thin when fully out, but, if well disbudded, most useful for show; it is one of the best of garden Roses. Colour, bright carmine pink.

C. W. Cowan (H.T.).—A very fine colour, midway between Marquise Litta and George C. Waud. There being so few rich red Roses among the Hybrid Teas, this should be very welcome.



ROSE MRS. CHARLES RUSSELL, A NEW ROSE PINK VARIETY THAT LASTS FRESH A LONG TIME WHEN CUT.

Dr. Nicolas Welter (H.T.).—Rosy salmon, with vivid centre. Fine long, egg-shaped flower and a glorious garden Rose.

Duchess of Normandy (H.T.).—A sport of Dean Hole, and its counterpart in every way save colour, which is salmon flesh paling to cream.

Duchess of Sutherland (H.T.).—Like a glorified Captain Christy, with a more shapely flower. Superb in form, not very free in the autumn, and a terror for mildew.

Edgar M. Burnett (H.T.).—An improved La France. This variety will be as great a favourite as Lady Alice Stanley.

General-Superior A. Janssen (H.T.).—Glowing carmine. Excellent grower. Much deeper than Mrs. W. J. Grant. Will become a general favourite.

Geoffrey Henslow (H.T.).—Another Rose of the colour of George C. Waud. Apparently a better grower and altogether most promising.

George Dickson (H.T.).—The "best dark Rose in the world," as I heard it described, and well worthy to bear such an honoured name. If it only carried its flowers erect and did not produce so many split blooms and were freer in blooming in the autumn, with less mildew, I should value it more; but no exhibitor can afford to be without it, and perhaps we have yet to learn how to treat it best.

H. V. Machin (H.T.).—Scarlet crimson. A magnificent bloom, one that we shall all want.

Jewel (H.T.).—One of the purest whites and quite large. The flowers are like big Water Lilies. Lovely in the half-open stage.

Killarney Brilliant (H.T.) is sure to be good. The colour is almost crimson.

King George V. (H.T.).—Almost a Hybrid Perpetual. Not very free flowering, but a splendid bloom and very valuable to the exhibitor. Colour, violet crimson.

Mabel Drew (H.T.).—One of the best of the Newtownards Roses, which is saying a good deal. A very refined flower, almost Tea-like in this respect. Colour, pale creamy yellow.

Mme. C. Chambard (H.T.).—Rosy flesh, from Prince de Bulgarie. Fine form and most promising.

Majestic (H.T.).—Colour, carmine rose, of grand form and fulness.

Marcella (H.T.).—Salmon flesh, very full. Good.

Margaret (H.T.).—Scarcely a novelty now, but should be grown by everyone. A fine deep flower of soft pink colour.

Marquise de Ganay (H.T.).—If well disbudded, blooms may be had of splendid size and very perfect form. Although a pink, it is distinct. A most prodigious bloomer.

Mayflower (H.T.).—Decidedly good, reminding one in colour of old Devoniensis, only of much better form and fulness.

Mrs. Amy Hammond (H.T.).—May be grown to an immense size. It is so very distinct that all must have it. Colour, amber and cream.

Mrs. Andrew Carnegie (H.T.).—A much overrated Rose. I have not seen a good flower all the season. It grows well, and perhaps some may show it well if it is shaded and papered up, but it is

a Rose I would not care to recommend while we have others better.

Mrs. Charles Russell (H.T.).—Very fine and with such lasting properties. The petals are almost wax-like in texture. Colour, rosy carmine.

Mrs. E. Alford (H.T.).—A Rose better under glass than outside, although at times it is good. It is a very bad one for mildew. Colour, silvery pink.

Mrs. George Shawyer (H.T.).—Of superb form and clear rose pink colour. Should be well sprayed to prevent mildew. Early in the summer it is grand.

Mrs. James Lynas (H.T.).—A grand Rose as seen at Belmont. I hope it will turn out as well in England. Colour, pearly pink, shaded peach.

Mrs. Muir Mackean (H.T.).—A distinct Rose and of fine form. Very useful. Colour, carmine crimson.

Mrs. R. D. McClure (H.T.).—Probably the best of last season's novelties. Like a very warm-coloured Lady Ashtown.

Mrs. Wallace H. Rowe (H.T.).—Very fine, of rather dwarf growth, reminding one of Papa Lambert in form and colour.

Nerissa (H.T.).—Good. Almost a dwarf Mme. Jules Gravereaux. Opens badly in wet weather.

Ophelia (H.T.).—A magnificent Rose, and at times quite good enough for a front-row flower. Colour, salmon flesh, shaded orange.

Souv. de M. Floquet (H.T.).—Another of the George C. Waud colour, rather less full, but more globular. It has been very fine with me.

COLOURED PLATE.

PLATE 1502.

THREE GOOD GARDEN ROSES.

THE three Roses shown in the accompanying coloured plate were purposely selected as three excellent and comparatively new Roses for garden decoration. Neither of them is a really good exhibition sort, but all are excellent for bedding and for cutting. Taking them in order of seniority, we must first deal with General McArthur. This was raised in America and first put into commerce in 1905. It must have been

with this, as we have never had them behave in this way.

Next must come Lady Hillingdon, raised by Messrs. Lowe and Shawyer, and sent out in 1910. We feel that we owe an apology to this charming Rose. For the first two years that we saw it and grew it, we were not greatly enamoured with its behaviour. Its flowers hung their heads too much and did not seem to come a good colour. This last two seasons, however, it has improved very considerably in both respects, and may be fairly regarded as one of the best yellow bedding Roses that we have. It is a Tea Rose and very charming when cut, and in the half-opened stage is ideal for button-holes. It has a moderately vigorous habit



A BEAUTIFUL EFFECT OBTAINED BY USING RAMBLER AND DWARF ROSES IN CONJUNCTION.

St. Helena (H.T.).—At times too much like Joseph Hill. It may, perhaps, be of better habit, but is evidently a seedling of that grand sort, and we have now enough of that type.

Sunburst (H.T.).—Magnificent and quite good enough for a show box, whether of a pale colour, as it frequently appears, or its true deep cadmium yellow.

There are undoubtedly some other good Roses of recent introduction that will prove excellent for exhibition, and it would be interesting if those who have grown them would send their experiences to the Editor. Roses behave so differently in different localities that too much cannot be known about them, especially these newer varieties.

DANECROFT.

very soon after that date when our attention was drawn to it in Messrs. Stuart Low and Co.'s nursery by Mr. L. J. Cook, who then predicted a brilliant future for it. That his high opinion of it was justified, time has proved. As we write, in the closing days of September, a bed of this deliciously fragrant Rose, edged with the white Polyantha Katherine Zeimet, is one of the most brilliant and pleasing features in our garden. This Hybrid Tea Rose has a vigorous, branching habit, is seldom attacked by mildew, flowers freely from June until well into October, and the blooms are as fragrant as the Roses of our forefathers. In a few gardens we have seen the blooms take on rather a blue tint during the very hottest days of July, but imagine that the soil must have something to do

and is not so much addicted to black spot and mildew as many other sorts.

The third Rose in the plate, Louise Catherine Breslau, we owe to the skill of M. Pernet-Ducher. It is classed by the National Rose Society as an Austrian hybrid, but we hope the race will soon be known as Pernet Roses. As it was only sent out two years ago, we cannot say a great deal about it at present, except to predict that it will become, in a few years' time, one of the best-known garden varieties. It is really an improved Arthur R. Goodwin, a Rose of which we have always held a very high opinion, but which is scarcely vigorous enough in many gardens. We have seen Louise Catherine Breslau growing in several nurseries last year and this, and intend to find room

for a few bushes this autumn. It appears to have a good constitution, and those who have grown it are not at all backward in singing its praises. Messrs. H. Merryweather and Sons of Southwell, Notts, to whom we are indebted for the flowers from which the coloured plate was prepared, consider it one of the best garden Roses of its colour—and they are good judges.

**POLYANTHA
ROSES IN THE
GARDEN.**

WITH the advent of the Baby Ramblers, the class of Dwarf Polyanthas forms a charming addition to our bedding Roses. These so-called Baby Ramblers are, of course, not ramblers at all, but little dwarf bushes from 1 foot to 2 feet in height, and nearly always in flower. Only in the shape and the large trusses of flower and, to some extent, in their foliage do they resemble the ramblers. As far back as 1879 a separate class existed for Polyantha Roses, or, as the National Rose Society prefers to call them, so as to distinguish them from the Multifloras, the Polyantha Pompons. This was at a time previous to the great new class of Hybrid Teas and during the pre-eminence of the Hybrid Perpetuals and pure Teas. Among the then small collection of these miniature-flowered kinds there were several, mostly with large bunches of flowers, used for edging and small beds, some, like *Perle d'Or* and *Cecile Brunner*, Tea-like in form, and others, such as *White Pet* and *Mignonette*, favouring the Multiflora and the Sempervirens hybrids in their shape of flower and leaf. All of them were small flowered, and of dwarf and perpetual habit.

Some of the best of these are still grown, and are yet extensively used as a finish to beds of large-flowered kinds. Of these the following are to be recommended: *Anna de Montravel* (1879), white, very dwarf, beautiful form. *Cecile Brunner* (pale pink) and *Perle d'Or* (salmon yellow), both with large, bold bunches of flowers; a fine match in form and habit, and persisting until

October. *Mignonette* and *Gloire des Polyanthas*, pink and rose pink, alike in habit, with trusses of cup-shaped, semi-double flowers. *White Pet*, like a dwarf *Félicité Perpétue*. All of the foregoing make fine edging or bedding kinds. These were followed by the two Lameschs—*Eugénie Lamesch*,

since the introduction of the Baby Ramblers that attention has been directed afresh to this class. Following closely upon *Crimson Rambler*, *Dorothy Perkins* and other new climbers, they have fitted in so well with the new scheme of Rose gardening as to obtain a well-deserved



A CHARMING GROUPING OF ROSES AND DELPHINIUMS IN A GARDEN AT SURBITON HILL. PLANTING TIME WILL SOON BE HERE.

with the scent of *Parma Violets* and valuable for its colour, clear yellow, edged mauve; and *Léonie Lamesch*, most distinct in its shades of terracotta red and orange, but rather taller than the others of this section. These earlier varieties still have a certain vogue, but it is

popularity. The first of them, *Mme. N. Levavasseur* (Baby Rambler), proved dull in colour and in dry seasons sometimes failed to continue its crops of flower, but it was quickly followed by better and brighter kinds. *Maman Levavasseur* (Baby Dorothy), a dwarf, very free pink;

Katherine Zeimet, perhaps the freest and best white; Phyllis and Mrs. Cutbush, pinks; and, finally, Jessie and Orleans, reds, are among the latest additions. Another good white is Jeanne d'Arc, not only good in itself, but a first-rate companion to Mrs. Cutbush and Jessie, the three going remarkably well together. Jessie is probably the most perpetual and continuously blooming Rose we have. Beginning in late June, it persists until the November or December frosts, retaining its dwarf habit and yielding innumerable crops of crimson scarlet flowers. Mrs. Cutbush as a clear pink and Orleans as a rosy scarlet are in the same way, but slightly taller. All these varieties have shiny, clean foliage, and Mrs. Cutbush and Orleans have flower-stalks sufficiently long to enable them to be cut for table decoration. These Pompon Roses should be planted in beds closely together, about 15 inches by 12 inches apart. They replace with advantage the Geraniums and other plants in summer bedding, and in the Rose garden they add a finish and an elegance to the Teas and Hybrid Teas, and may be planted as an edging to these larger-flowered kinds or separately in a bed, the flatness of such beds being with advantage broken up by the insertion of a few half-standards of the same kinds on 2 feet to 2½ feet stems. These half-standards are particularly attractive and floriferous. Also the value of such kinds as Jessie and Orleans as pot plants has already been proved. They are always in bloom and easily grown, and they mingle, too, so well with the Ramblers in pots which are so much used in house and greenhouse decoration.

Finally, a word must be said as to the other and newer varieties. Erna Teschendorff is a deep rich crimson sport from Mme. N. Levavasseur, but possessing its faults as well as its merits. Aennchen Müller has immense trusses of flowers, but is subject to mildew. Varieties like Kleiner Alfred, Miese and Cyclope are delightful in colouring, but do not grow well, and so are useless for massing. A really good yellow has not yet been obtained, though, after Eugénie Lamesch, perhaps George Elger may be cited as the most suitable for massing. This last is distinctly promising, but is closer to the Tea section than to the Baby Ramblers. Aschenbrödel is a most delicate pink in colouring and is distinct. The variety Queen of the Musks, with almost evergreen foliage and mildew-proof, is somewhat lacking in brightness, but probably will be the progenitor of future kinds. It is most profuse and autumnal. Röd-hätte, a hybrid between Jessie and Hybrid Tea Liberty, is intermediate between its two parents. It has bold bunches of light red flowers, a clean, bright green foliage, and is never out of bloom. Yvonne Lornage, a vivid coppery terra-cotta and red, promises well and is most distinct, and Maman Turbat and Jenny Soupert may prove useful additions to the pinks. Some advance has

been made with the singles, and of these Papa Hemeray, growing from 1 foot to 18 inches, with large bunches of single flowers, crimson in colour, is distinctly good. Altogether a very pretty class, and one likely to be developed in the near future.

G. LAING PAUL.

THE BEST AUTUMN-FLOWERING ROSES.

THE wonderful strides that have been made in the improvement of Roses during the last ten or fifteen years are never at any other time brought quite so vividly to our notice as



ROSE FLORENCE FORRESTER, A NEW WHITE HYBRID TEA RAISED BY MESSRS. S. MCGREDY AND SON.

during the waning days of autumn. Instead of the straggling bushes, with their few badly formed flowers, that were the rule rather than the exception, we now have the Rose garden in September, and often well into October, almost as brilliant and certainly quite as interesting as in the more genial days of June and July. The present year has been an exceptionally good one for Roses, especially where the beds were mulched early with short manure to preserve the natural moisture of the soil, and I do not ever remember seeing such a beautiful autumn display of good blooms as there is just now. In some respects these autumn Roses are preferable to those of summer; they may not be quite so large, but the cooler weather enables the exquisite colour of some to be better

revealed, while the blooms last in good condition for a much longer period, whether cut or left on the bushes. This lasting character is recognised by the National Rose Society, who held a two days' autumn show last year for the first time.

Now that there are so many good autumn-flowering Roses, it is not without some hesitation that one ventures to compile a list of the best. Differences of opinion there will always be, and it is necessary to remember that a Rose which does well in one garden will not always give good results in another. Most of the varieties named here I have had under observation for three years, some considerably longer, and their inclusion is not based on their behaviour in one garden, but in many, as well as in some of the largest Rose nurseries in many parts of the country. Crimson and scarlet shades: *General McArthur, Richmond, Liberty, *Ecarlate, *Grüss an Teplitz, Hugh Dickson, J. B. Clark, Florence Haswell Veitch and *Château de Clos Vougeot. Pink shades: *Caroline Testout, *Lady Ashtown, *Lady Alice Stanley, Mme. Segond Weber, Mrs. E. J. Holland, Gustav Grunerwald, *Miss Cynthia Forde, Königin Carola, La Tosca and *Zephyrine Drouhin. Yellow, orange and buff shades: *Arthur R. Goodwin, *Duchess of Wellington, Rayon d'Or, Marquise de Sinety, *Mme. Ravary, Lady Hillingdon, *Amateur Teyssier and Crépuscule. Shaded salmon, fawn or apricot: *Prince de Bulgarie, *Pharisäer, *Mme. Léon Pain, *Mme. Abel Chatenay, Earl of Warwick, Betty, *Lady Pirrie and Frau Lilla Rautenstrauch. Cream and white: *Entente Cordiale (Ducher), Molly Sharman Crawford, *James Coey, Mrs. Herbert Stevens, *Frau Karl Druschki and Mrs. David McKee. Nita Weldon should come here, but the flowers are not erect enough for bedding. In addition to the varieties already named, I would include *George C. Waud (vermilion, suffused orange) and *Frances Charteris Seton, usually described as rose pink, although it is scarcely what one usually associates with that colour. It is an excellent Rose, and very fragrant. Among the whites one would like to include White Killarney, were it not such a martyr to mildew.

Of Dwarf Polyantha Roses there are several good varieties for the autumn, the best of all, in my opinion, being *Jessie, which commences to produce its unfading clusters of bright scarlet crimson flowers early in July, and never halts until the frosts of October put it out of court. Orleans, with bright pink flowers, is very charming in the autumn; during the hot days of summer its blossoms get badly scorched. Aennchen Müller, with its clusters of rather large pink flowers, which have curiously but not unpleasantly twisted petals; and Katherine Zeimet (white) must also be named here. For the benefit of those who will shortly be planting, I have marked with an asterisk what I consider the best two dozen bush Roses for autumn flowering. It would be interesting and



A ROSE ARCH PHOTOGRAPHED SHORTLY AFTER ERECTION AND JUST AS THE ROSES HAD BEEN PLANTED.

useful if readers would send the Editor other lists.

For rambling Roses that flower in autumn we must forsake the wichuraianas and turn to the Teas, Noisettes, climbing forms of Hybrid Teas, or Bourbon hybrids. Longworth Rambler (light crimson), Ards Rover (crimson), Gloire de Dijon (buff), Climbing Caroline Testout, Climbing Mrs. W. J. Grant, Armosa (pink), Bouton d'Or (usually referred to as an improved Gloire de Dijon) and Danæ (creamy yellow) are about the best. William Allen Richardson, the well-known rambling Noisette, is this year flowering well for the second time in many places, but its behaviour as an autumn-flowering Rose is rather erratic. Gustave Regis, too, is flowering well now, but, though suitable for pillars, is scarcely strong enough for arches or pergolas. It is one of the best button-hole Roses we have, its long, pointed buds of nankeen yellow being always acceptable. H.

ROSES ON ARCHES, PERGOLAS AND PILLARS.

SINCE the advent of Crimson Rambler and its retinue of wichuraiana hybrids, a good deal of interest has been taken in Rambler Roses, and it is difficult now to find a garden of any dimensions without an arch or post supporting one or more of the many beautiful varieties obtainable. This is undoubtedly a step in the right direction. These Rambler Roses, judiciously used, are capable of creating very beautiful effects in the garden, as will be seen in the illustration on page 494, where ramblers are used in conjunction with bush varieties. There we see part of a lofty pergola gracefully clothed with free-flowering ramblers, the beauty and interest of which cannot be denied.

Unfortunately, most of these Roses have only one flowering season; but a few hybridists, notably the Rev. J. H. Pemberton, are devoting their attentions to the creation of a perpetual-flowering race, and already there are several varieties obtainable which flower freely in autumn as well as in the warmer days of summer.

But even though we only get three or four weeks of blossom from the wichuraiana hybrids, they are so beautiful as to justify us in planting them freely. At one time we used to find trellis and arches clothed with Ivy, Virginian Creeper, or other more or less uninteresting plants, but now their places have been taken by the Roses. Apart from the wichuraiana and multiflora hybrids, however, we must not overlook the large-flowered rambling varieties—sports in most instances of well-known Hybrid Teas or Hybrid Perpetuals. Thus we have rambling forms of Mrs. W. J. Grant, Liberty, Lady Ashtown and Sunburst, Roses the value of which can scarcely be over-estimated, especially where good blooms are required for cutting. We must remember that these strong-growing forms of our

favourite bush Roses give almost, if not quite, as good blooms as the bush plants, and, owing to the greater length of stem, in much larger quantities. In addition to these there is yet another type of Rambler Rose with large flowers, good examples of which are Mme. Alfred Carrière, white, and Longworth Rambler, bright cherry red. These are exceedingly vigorous and flower from June until well into October; hence their value in the garden must not be overlooked.

When we come to Roses for pillars or posts 5 feet or 6 feet high, we have quite a number of excellent semi-rambling varieties to select from. Grüss an Teplitz, Gustave Regis, Zephyrine Drouhin, Irish Elegance and Hugh Dickson are all good Roses that do best when allowed to extend to large bushes, and each will easily clothe a pillar of the height named. They are all ideal for cutting, and it would be difficult to select a more charming Rose for a button-hole than the half-opened bloom of Gustave Regis.

The mention of pillar Roses brings to mind two excellent varieties that have had this name applied to them in rather a misleading way. I refer to Paul's Carmine Pillar and American Pillar. It is perfectly true that both do make excellent pillars, but their vigour is such that they are more at home over a tall arch, trellis or pergola, where their bushy growths can develop fully. In the Rose Number of THE GARDEN last year

the illustration at the top of this page was used as an example of a good rustic arch, the posts being placed 4 feet 6 inches apart each way, and the height over all 8 feet. The photograph from which that illustration was prepared was taken at the end of March, 1912, directly after it had been constructed and the Roses planted. The other illustration on this page is from a photograph of the same arch, but from a different standpoint, taken in July this year, i.e., a little over two years after the Roses were planted. Four varieties were put in, one at each post, viz., American Pillar, François Foucard, Shower of Gold and Mme. Alfred Carrière. The variety seen so prominently in the second illustration is American Pillar, which has clothed the whole of one side of the arch and smothered François Foucard, as well as taking unto itself the whole of the roof. On the other side Mme. Alfred Carrière has done well, and Shower of Gold is struggling for space. Many of the rods of American Pillar were at pruning-time 14 feet long, and were shortened back to about eleven feet. During the whole of July this Rose was a picture to behold, its large trusses of rose pink single flowers, with their white centres, lasting in good condition for over a month. It is a Rambler Rose that ought to be in every garden in the United Kingdom. Paul's Carmine Pillar is also a single-flowered Rose, and one of the earliest to open its blooms. If grown as a pillar, it ought to have a support at least 10 feet high, and it will grow much taller than that. At Kew it is allowed to ramble at will over an old evergreen, I believe a Holly, and the background of dark green foliage mirrors into greater relief the vivid colour of the Roses. Unfortunately, the blooms are fugacious, but its vigorous habit, freedom of flowering, and the early date at which the blooms open, place it in the category of the indispensables. S. X.



THE SAME ARCH PHOTOGRAPHED A LITTLE OVER TWO YEARS LATER

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Early Peach Trees in Pots.—The necessary pruning and thinning of these trees should be accomplished at once. Very little water will be needed until the trees are placed in the forcing-house. If red spider has been present on the foliage during recent dry weather, the trees must be thoroughly washed before they are introduced to their winter quarters. In the meantime they should be fully exposed to the weather, but some means must be adopted to keep them from being blown over by rough wind.

Vines.—Young Vines which were planted in April should still be growing freely, and must receive a liberal supply of clear water at the roots. Lateral growths may be cut back to within one eye of the main stem in order to secure the full benefit of the sun. Ventilate freely during the day, shutting the house early in the afternoon; but damping of the floors or wall will not be necessary now.

Midseason Vines from which the Grapes have been cut may now be half-pruned in order to plump up the buds near the base of the shoots. Examine the borders and, if necessary, give a good soaking of clear, soft water. The ventilators may be left open day and night.

Plants Under Glass.

Chrysanthemums.—No time should be lost in removing the plants from the open air to a well-ventilated structure, where they should be fully exposed to the light. Do not place the plants too closely together, as this will have a detrimental effect on the foliage. The latest batch of plants may still be left in the open, but some protection should be at hand in case of frost. If blinds are available, some temporary spars can be placed in position 2 feet above the plants, so that the blinds may not come in contact with the foliage. Some stimulant will be necessary, but must be applied in moderation, or more harm than good may result.

Euphorbia jacquiniæflora.—This is one of the handsomest winter-flowering stove plants, and succeeds well when planted in the warmest end of the stove and trained on the roof. As a pot plant the best results are obtained by striking three or four cuttings in a small pot in the spring, and potting them on undisturbed as it becomes necessary. By this method the plants do not require stopping, and the shoots will, consequently, be much stronger. Very careful watering is necessary, and, when the flower-buds are formed, the plants will benefit by applications of weak manure-water.

Camellias.—Disbudding should be carefully performed before they are too far advanced, leaving one bud on each shoot where the plants are in robust health. Syringe twice daily with soft water when the weather is favourable. If necessary, a top-dressing of turfy loam and peat may be applied after the removal of the old surface soil, and this must be made quite tight by ramming. Manure-water may be applied with advantage. The soil must never be permitted to become too dry, or the buds will drop in consequence.

Azaleas which have been grown in the open during the summer should now be removed to a cool house where air can be freely admitted. Syringe with clear water daily, and if thrips are present on the foliage, the house should be carefully fumigated once or twice to make quite certain of their destruction.

The Flower Garden.

Agapanthus and other specimen plants in tubs should be placed under cover, with as little delay as possible. Large plants of Ivy-leaved Geraniums may be placed in some well-ventilated structure where they will receive as much light as possible during the dark days of winter.

Lobelia Cuttings.—It is not too late to part and make cuttings of stock plants which may have been cut over for the purpose. The small cuttings are preferable, as they will stand the winter much better than old plants. A close, cold pit is all that is necessary, providing sufficient silver sand is used.

Begonias may be lifted as soon as the foliage has died down, and the tubers placed in shallow boxes. When quite dry they may be stored in a dry, frost-proof room until the spring.

The Hardy Fruit Garden.

Planting.—The earlier this work is taken in hand the better, especially if the trees have been grown at home for a season with the intention of filling vacant spaces, as in this case it is unnecessary to wait until the leaves drop, providing the roots are moistened before lifting. But if the trees have to be brought from a distance, it is not advisable to lift them so soon as to cause the bark to shrivel, or the result will not be satisfactory. Sweet Cherry trees, which lose their leaves early and are among the first to bloom, may be lifted first. When planting fruit trees of any kind, if the same site has to be occupied again, an effort should be made to provide new soil for the purpose, and this may frequently be obtained from some part of the garden where fruit trees have not been grown. This may be enriched with crushed bones, old lime rubble and thoroughly decomposed manure from the farmyard, which should only be applied as a surface-dressing. Drainage is an important matter in heavy soil, and this must be carefully attended to in the first instance. In such soil deep planting must be avoided.

The Kitchen Garden.

Mushrooms.—There need be no difficulty now in providing a supply of Mushrooms throughout the winter if sufficient horse-manure is available to make up the beds. This should be collected daily and placed in an open shed, where it may be turned every second day until it is ready for removal to the Mushroom-house. Place the manure in position and allow it to remain until the temperature of the material rises to 85°. At this stage the manure should be rammed tightly together, and spawning may take place when the temperature has dropped to 80°.

French Beans in Pits.—Young plants in flower should be freely ventilated during mild weather. Give a liberal supply of water at the roots and do all that is possible to promote clean, healthy growth. Another sowing may be made in 7-inch pots, which should be placed in a temperature of 65°. As soon as the plants are well through the surface, they should be placed within 18 inches of the roof glass. Syringe twice daily, and as growth advances give frequent waterings of liquid manure.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Mushrooms.—Beds that were spawned about the beginning of last month should now be producing Mushrooms. Attend carefully to the damping of the paths and walls, and if the surface becomes dry, a slight spraying of tepid water must be given. Some clean straw may be spread over the surface, which will keep the bed in a fairly moist condition. Continue to collect fresh horse-manure for successive beds, spreading it out in a dry, open shed and turning it frequently to prevent heating.

Parsnips.—In lifting and storing root crops it should be remembered that Parsnips keep better in the ground than out of it, so that roots ought only to be taken up when wanted. Should frost be severe, a covering of some strawy manure may be spread over the ground. This will prevent injury to the roots and facilitate the raising of the crop when wanted.

The Flower Garden.

Roses.—Dwarf Roses should be gone over at this season and any unusually long shoots shortened back to at least half their length. If left alone, these strong shoots are frequently broken off entirely at the base by wind. But perhaps the most serious danger resulting from these shoots is their swaying to and fro, thus loosening the plants and breaking off the more tender roots. Where it is intended to make

new plantations next month, the ground should be prepared at once, so that there will be no delay in planting when the Roses arrive.

Sweet Peas.—The sowing of Sweet Peas in the autumn (that is, in pots) has much to commend it. Some years ago we sowed a large batch about the middle of October, and we had the satisfaction of having them still in bloom the following October. Sow five or six seeds in a 6-inch pot, cover with half an inch of soil, and place the pots in a cold frame. When the young growths appear, remove the pots to a cool house and place them on a shelf near the glass. Very little water will be required during the next two months.

Spanish Irises.—It would be difficult to imagine anything more beautiful than a collection of these lovely Orchid-like flowers, which come into bloom about the beginning of June. It would be quite out of place to mention varieties, as they are all more or less beautiful. The bulbs should be planted about four inches deep in loose, sandy soil and the same distance apart.

Plants Under Glass.

Poinsettias.—These fine winter decorative plants, which have been hardening their growths in frames, should now be placed in a warm house where the temperature can be maintained at 60°. Stand them where they can have full exposure to the light, and as the pots will now be well filled with roots, artificial feeding may be given. On no account allow the plants to become dry at the roots.

Malmaison Carnations.—Young layers potted up last month should now be removed from the frames to the Carnation-house. Before doing so, all shading must be washed from the glass and the woodwork inside thoroughly washed down. Where gravel or ashes are used on the stages, they had better be renewed, so that everything is fresh and clean. During the next three months these plants require very little water. Admit air day and night, and in dull and foggy weather only turn on sufficient heat to keep the house dry.

Tuberoses.—The first of these bulbs, chiefly from Africa, arrive about this time, and should be unpacked at once and spread out on shelves, as, owing to the long time they are in transit, they often get heated, which renders them entirely useless. Before potting, it is most important that each bulb be cleaned—that is, all the small bulblets removed—otherwise the result will be a mass of foliage and very poor flower-spikes.

The Hardy Fruit Garden.

Planting Wall Trees.—A start should now be made in preparing the ground where wall trees are to be transplanted, and at the outset it may be said that if this work is done carefully, the trees will suffer very little check. Prepare a trench of sufficient size to suit the particular tree to be moved, and have at hand some chopped turf and old mortar rubble, to be worked in among the roots. Before unfastening the trees from the walls, work the soil from the roots, retaining as large a ball as can be conveniently moved. To remove the tree an ordinary plank or garden mat should be worked under the ball. Avoid deep planting at all costs, and carefully spread out the roots as the work of filling in the trench proceeds. Finish by giving the ball a thorough soaking of water to settle the soil in the trench, and give a slight mulching of manure to encourage root action.

Fruit Under Glass.

Vines.—No time must be lost in pruning those Vines that are intended for early forcing. Unless mealy bug has been present, the rods should not be scraped; this often does a vast amount of harm. Merely rub off the loose bark with the hand, wash down the woodwork, and run a cloth soaked in paraffin over the wires. Remove all loose surface soil and top-dress with some good loam. When the work is completed, keep the house wide open and as cool as possible; indeed, a good sharp frost up to 10° would do no harm. Unless the border is dry, no water should be given until the house has been closed down and growth commences.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

ROSA PERNETIANA: 1838—1914.

EARLY in the reign of Queen Victoria a new Rose named Persian Yellow arrived in England whose manners and colour won the admiration of rosarians of the day. This little visitor was taken everywhere, and in the years that followed was to be found in all parts of the world. Some sixty years after its arrival M. Pernet-Ducher arranged a successful match for this wanderer, from which he gave us Soleil d'Or in 1900. Rather plain of form, the fierce prickles, reddish wood and scented foliage denoted a new break. A few more years passed away in that famous garden not far from the shores of the Mediterranean where Persian Yellow first settled down. A rosarian went on quietly working among his Roses, till once again he startled the Rose world by sending over the Lyon Rose, another member of Persian Yellow's family. No need for me to describe the delight of everyone. That April meeting of the Royal Horticultural Society is still fresh in our minds. Recollect once again those beds at the Franco-British Exhibition of 1908, and how everyone wished to possess this Rose painted with an artist's brush! It was realised that M. Pernet-Ducher had created a new race. Other raisers soon followed. Several have used this blood with success, some in keeping the strain pure, others infusing the Pernetiana colour into the Hybrid Teas. After Soleil d'Or and Lyon Rose we had from several sources Les Rosati, Gottfried Keller, Entente Cordiale and Soleil d'Angers; then Juliet (the pride of an English firm), Louis Barbier (one of the most attractive for pillar work), Johannesfeuer, Parkfeuer, Rodophile Gravereaux and the charming Beauté de Lyon (with huge red thorns and fragrant foliage). These are more or less after the style of Soleil d'Or in habit of growth.

Arthur R. Goodwin, Mme. Ruau, Viscountess Enfield and Rayon d'Or possess the characteristics of the Pernetiana break—scented foliage resembling Pineapple, the reddish wood, fierce prickles, with beauty of form and habit of growth like the Hybrid Teas. At the International Exhibition in London, 1912, a special prize was offered for the best new seedling Rose. This coveted honour was won by M. Pernet-Ducher with Mme. Edouard Herriot. The demand was so great that everyone had to wait a year longer to possess this wonderful Rose, but it can now be obtained from most nurserymen. Its colour is always described differently. Some have it deep terra-cotta or reddish copper; the National Rose Society have it vivid terra-cotta, passing to clear strawberry rose. Can you imagine it? No; but when your plants bloom you will agree with either description. The form, habit and constitution are everything to be desired. Like its ancestors, this Rose is destined to travel into gardens throughout the world.

Louise Catherine Breslau has mildew-proof foliage. Willowmere, named after Admiral Ward's home in America, is an improved Lyon. Cissie Easlea, a saffron yellow fusion from Mme. Melanie Soupert and Rayon d'Or, is very free-blooming. It may interest readers to know that several of the Pernetianas were in bloom until after Christmas, 1913, Cissie Easlea being the best. Before the charm of Mrs. George Beckwith, Rayon d'Or pales. The former is a deeper and more brilliant yellow, combined with handsome foliage and

thorns. We are impatiently waiting for its fair presence in our gardens. Constance Ward, the Constance of the International, is more vigorous and of better habit than Rayon d'Or, blooming freely; a charming shade of old gold. Mme. John Crouch, a sport from Lyon Rose, is an acquisition; and Marie Adélaïde Grande Duchesse de Luxembourg, an attractive shade of orange yellow, is well thought of by our friends across the water. I have only seen it in two gardens. Those who like the various shades of yellow will appreciate it.

Messrs. Alex. Dickson of Newtownards fame, who have utilised the Austrian strain for some years, have some very special and promising varieties of this class. Mr. Hugh Dickson has given us an attractive variety from an Austrian Yellow seedling crossed with Joseph Hill, which he has named Mrs. Hugh Dickson, a rich yellow, tipped rosy pink, suffused with apricot, beautifully formed large blooms; it grows freely. One of his latest is Muriel Dickson, after the colouring of Mrs. A. R. Waddell, with an effective glow in the bloom, very charming. It possesses red thorns, is always in bloom, excellent for bedding, and really a wonderful colour.

Messrs. B. R. Cant have sent us Autumn Tints. It has Pernetiana blood, and also inherits some of Mme. Edouard Herriot's colour. Another acquisition in this class, from Mr. T. W. Piper, we have in F. J. Barry, a pure yellow sport of Arthur R. Goodwin, which it resembles in all but colour.

Sonnenlicht is an interesting variety, very useful for hedges and massing. It is from Mary Fitzwilliam crossed with Harrisonii, and has pure canary yellow, semi-double blooms, with a delightful perfume; free blooming.

Messrs. S. McGredy and Son infused the Pernetiana blood into the Hybrid Teas with excellent results, shown in the gorgeous colours seen in Old Gold, Lady Mary Ward, Mrs. F. W. Vanderbilt and Mrs. C. E. Pearson. We want perpetual climbers in Pernetiana colours after the style of growth of Dorothy Perkins. Who is going to give them to us?

On May 5, 1914, some seventy-six years after Persian Yellow came to England and fourteen years after the creation of a new race, the Council of the National Rose Society of England decided that this race should in future be known as Rosa pernetiana, an honour well earned by the raiser and a happy tribute of the Entente Cordiale existing between this country and France, shown in the welcome given to Their Majesties King George and Queen Mary on their recent visit. Our national flower has always been in Royal favour. A basket of blooms was presented to Queen Mary on Coronation Day, 1911, by the National Rose Society. The beauty of it can be seen in the Rose Annual for 1912. The Gracious Patroness of the National Rose Society, Queen Alexandra, accepted a charming basket of flowers on St. George's Day, when the Pernetianas were again in request for their colour.

And what of M. Pernet-Ducher, the man whose skill has enriched our gardens beyond his own dreams! The gorgeous array of seedlings to come make us realise the wonderful mystery of Nature. What memories in the background of a mind so richly stored! The day Persian Yellow was fertilised, when the results of labour bore fruit, the quiet triumph felt as the slow creation of a new race went on under his hand; The readers of THE GARDEN wish him many happy days among the Roses he loves so well.

A list of Pernetiana Roses is given below—founders of the race, Persian Yellow and Antoine Ducher, their first offspring Soleil d'Or: Arthur R. Goodwin (Pernet-Ducher), Beauté de Lyon (Pernet-Ducher), Cissie Easlea (Pernet-Ducher), Constance Ward (Pernet-Ducher), Deutschland (Kiese), Entente Cordiale (Guillot), Gottfried Keller (Dr. Müller), Juliet (W. Paul), Johannesfeuer (Turke), Lyon Rose (Pernet Ducher), Louis Barbier (Barbier), Louise Catherine Breslau (Pernet-Ducher), Les Rosati (J. Gravereaux), Mrs. George Beckwith (Pernet-Ducher), Mme. Edouard Herriot, Mme. Ruau (J. Gravereaux), Mme. John Crouch (E. Turbat), Marie Adélaïde Grande Duchesse de Luxembourg (Soupert et Notting), Parkfeuer, Rayon d'Or (Pernet - Ducher), Rodophile Gravereaux (Pernet-Ducher), Soleil d'Angers (Ch. Detriche), Viscountess Enfield (Pernet-Ducher) Willowmere (Pernet - Ducher), Muriel Dickson (Hugh Dickson), Autumn Tints (B. R. Cant), F. J. Barry (Piper), and Sonnenlicht (Kiese). It will be interesting to note in which class those Messrs. McGredy have so successfully infused with Pernetiana colourings will be placed in the reclassification now being discussed. E. E. F.

[The foregoing article, by an esteemed lady correspondent, was written before the outbreak of war, but is particularly applicable now that our Forces are fighting side by side with those of our French friends. The husband of our correspondent is with His Majesty's Army, and we feel sure that our readers will join with us in wishing him a safe return.—ED.]

THE EDITOR'S TABLE.

A Good Early Pear.—Messrs. George Bunyard and Co., Royal Nurseries, Maidstone, send fruits of a good early Pear named Michaelmas. This variety was raised in Gravesend from a seed of Winter Nelis, and first introduced by Messrs. Bunyard in 1900. The fruit is rather small, roundish, and greenish yellow in colour, but the flesh is white, sweet, of good flavour and melts very easily. We understand that the trees crop regularly and freely, and this being so, we anticipate that Michaelmas will prove one of the most useful dessert Pears for this season.

A Beautiful Autumn-Flowering Shrub from Cornwall.—Mr. J. E. Sanders, Green Lane Nurseries, Redruth, sends flowering sprays of Escallonia montevidensis. The white blossoms are borne in fairly large terminal panicles, and at a short distance look very much like white Lilac. They have a neat foil of glossy, evergreen foliage. It would be interesting to learn if this charming shrub has proved hardy in more northern parts of the country. Mr. Sanders writes: "I enclose a few sprays of Escallonia montevidensis. I thought it would interest you to know that this is an excellent autumn-flowering species. It has been in flower for nearly two months, and looks promising to remain in flower for at least another month. It also makes a nice specimen. The plant these flowers were cut from is growing in a border, and is 22 feet high and 8 feet through."

Roses from Essex.—Our esteemed Rose contributor, Mr. W. Easlea, sends from his Danecroft Nursery, Eastwood, Essex, some very charming autumn blooms of Rose Mme. Edouard Herriot. The wonderful flame colour is particularly good in these blooms, cut on October 1, while they possess almost as much substance of petal as those that open early in the year. Mr. Easlea,

in writing, states that the plants are as vigorous as those of Caroline Testout. He also sends a specimen of a new Rose of his own raising named Oraoenta. This is a charming shade of shell pink, and the large flower is of excellent, conical form. In addition it emits a delightful and powerful fragrance, so that it should be a great favourite when better known.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLET-COLOURED VERBENA (M. E. Gladstone).—The one variety most likely to meet your requirements is that known as Lovely Blue, which in one garden of our acquaintance is bedded out in its thousands. Not only is it excellent in colour, but it is also highly fragrant, of good constitution and free in flowering. It was raised, or introduced, we believe, by Messrs. Keynes, Williams and Co., Salisbury, and you might obtain flowers from that firm to give you an idea of its colour. They might also submit flowers of others of a similar hue. Godetias usually come true from seed, and there should be no difficulty whatever in securing the shade you require. Sutton's Double Rose and Satin Rose are in the colour range you name, and these, with others, are offered in the catalogue of Messrs. Sutton and Sons, Reading. Moreover, we saw these varieties, with many others in excellent condition in the seed trial grounds of the firm named, a few weeks since.

PRIMULA PULVERULENTA (Mabel M., Carlisle).—This species is a true perennial and will endure for years. The best effects are, however, secured when the plant is raised periodically from seeds, not quite on a biennial plan, but very near this. The reason is that the seedlings surpass in vigour, stature and freedom of flowering the plants raised by means of division or in other ways, and, if grown in a wet or fully moist position, will attain 4 feet high, flowering in proportion. Moisture, indeed, is essential to its fullest development, while it is one of the finest species of a semi-bog-loving nature that we know. The plant produces seeds in abundance, and these while fresh vegetate freely and quickly. We have seen self-sown seedlings springing up in their hundreds at the base of groups planted near water or in quite moist places. It is natural for the leaves to turn yellow in autumn and for the plant to revert almost to a corm in winter. Such things are, however, influenced by the degree of dryness or wetness about the plants, and also by the mildness or severity of the winter itself.

WATER LILIES IN BASKETS (E. Moon).—These should still be kept in the baskets in which they have been grown during the season. Do not, on any account, disturb them at the roots during the dormant season. See that they are sufficiently low down in the water for

the crowns not to become frozen. Not that this would injure them, but it is expedient not to incur the risk of both expansion and contraction. Guard against any injury by voles (sometimes called water-rats) by placing a ring of galvanised wire around the tank or pond. In the spring—about the end of April—look to their condition, and, if the plants need larger baskets, place them in such. In any case, give them a top-dressing of good loamy soil, leaf-mould and road grit. Press this down firmly, and at the same time see that the rhizomes, if not firmly established, are well secured. Another way of keeping Water Lilies through the winter is to take them out of the water and cover them with leaves, so that they are not frozen. This will give sufficient moisture, as a rule; but should the leaves become dry, give them a good watering. As recommended for plants in water, guard against the vole and also the rat.

TREES AND SHRUBS.

TREATMENT OF TREE LUPINE (Burton).—Your Tree Lupine may be pruned a little now, but spring is a better time. Towards the end of February you may cut the shoots back fairly hard if you so wish, and new branches will be formed towards May; but if you prune severely now and the late autumn proves mild, new shoots may be formed which would be killed in the event of a severe frost being experienced. Nevertheless, it will not hurt to remove a few of the outgrowing branches.

CLIMBERS FOR WALLS (W. M. B.).—The only way in which you can assist Ivy to cling to your walls is to nail strips of wood to them, to which the Ivy can attach itself in its early stages. Of the two, Ampelopsis muralis is hardier than A. Veitchii, though both are hardy enough for most parts of this country. There is also very little to choose between them in the rate of growth. A. Veitchii is, however, the neater plant. Your Fuchsia may be pruned towards the end of winter, say, February. As a rule, Fuchsias are not cut into wood older than one year. That is, the previous year's wood is pruned back to within a few buds of the base.

PROPAGATING SHRUBS (W. S.).—The correct time to propagate Buddleia variabilis veitchiana and Hydrangea paniculata is from June to August, cuttings of soft shoots being used. These are inserted in pots of sandy soil in a close and, for preference, slightly heated propagating-frame. It is possible, however, that if you make cuttings of ripened shoots 9 inches to 12 inches long and insert them outdoors as soon as the leaves fall, they will root during the winter. The cuttings should be inserted in a slanting position in well-drained ground, and it is advisable to place a little sand at the bottom of each trench before the cuttings are inserted. Do not disturb such cuttings for a year. About three inches of each cutting should be left above the ground, the remainder being buried.

TREES FOR PLEACHED WALK (R. E. D.).—The common Lime is one of the best trees to form a pleached walk, and is used more frequently than any other. Even though your position is somewhat exposed, we think you will do better by planting it than by using another tree, for although the Elm could be employed for the same purpose, its roots would impoverish the soil in the vicinity over a greater area than the roots of the Lime. The trees should be planted about ten feet apart, and the front and back growth restricted while the side growth is allowed to develop. Gradually bend the heads across the walk until they meet, and when the top and sides are all clothed with branches, give an annual pruning to prevent overgrowth. The walk may be made any width you desire.

THE GREENHOUSE.

FRUITS OF FICUS REPENS (W. F. Dark).—The fruits of Ficus repens are not usually eaten, and it is doubtful whether they have any food value.

SOIL FOR CYCLAMENS (S. J. C.).—A very suitable compost for potting off young plants is equal parts of loam and good leaf-mould with a liberal sprinkling of silver sand. These should be well mixed together, and if passed through a sieve with a one-third of an inch mesh the operation of potting will be facilitated. A few broken crocks must be put in the bottom of each pot for drainage, and immediately over them a little of the rougher soil that has not passed through the sieve.

HINTS ON AURICULAS (Auricula).—Yes; it is advisable to repot Auriculas annually, and the best time is May or early June. This subject was dealt with fully in our issue of May 9, 1914. A few leaves will decay, even with the most expert growers, but if each plant is losing, say, five or six leaves at this time of the year, something is wrong in the treatment, and it may be, as you suggest, overwatering or the other extreme. It would not be for the want of repotting, as the plants were only recently purchased. If, however, the soil is in a sour condition or the stem at all loose, we should not hesitate to repot even now. Good fibrous loam forms the principal part of Auricula compost, and so far as our experience goes, the colour does not make a lot of, if any, difference. Those potted in a peaty mixture no doubt suffer from drought, and we advise you to leave out the peat when the time arrives to repot. We know it is most difficult to properly water a collection of Auriculas when they are repotted in different soils. The best plan would be to arrange them according to the soil employed; then you can study each group, and would, no doubt, obtain much better results. The mixture you have used should give satisfaction; but Auriculas, like most plants, require attention throughout the year,

especially in regard to watering and ventilation. No coddling is needed, and Auricula culture may be summed up in the word "moderation." At the time of repotting, all offsets with three or four small leaves may be removed, but the usual time is February and August. We referred to this matter in our issue of August 8, 1914, and February 7, 1914, and if these instructions are carried out, there will be few offsets when the plants are repotted. Offsets with no roots can be severed near the main stem, and then treated as cuttings. Three or four are placed around the edge of a 3-inch pot, using the ordinary mixture with a little more sand added. If put in a hand-light and kept closed for a week or two, they will soon make roots, when they should be potted off in single pots. When repotting old plants, the stem must be lowered so that the foliage is near the soil. If the variety is a choice one and it is desired to increase the stock, lower the stem to the offsets, otherwise they can be rubbed off and discarded. We do not know of any chemical that would kill the aphids without injury to the roots. This pest is not so harmful as an amateur would imagine; but if the frame is vaporised occasionally, a large number will be killed. At the time of repotting, Tobacco powder can be sprinkled among them with fatal results. Methylated spirit may also be used, and no harm will be done to the roots or plant.

ROSE GARDEN.

YELLOW ROSES FOR COLD GREENHOUSE (Roach).—We think you will find Melody one of the best to keep its colour, and for a good deep yellow Lady Hillingdon should do well, although, being a Tea, it would require some artificial heat. Herzogin Marie Antoinette has been very good with us. Perhaps it would be best to try this also. Sunburst is very apt to produce pale blooms in the first crop. Rather than add lime to your potting soil, we would suggest some bone-flour at the rate of about two pounds to a bushel of compost.

RAMBLER ROSE DISEASED (A. J. C.).—The Roses are attacked by mildew. Try Seride, which can be obtained from Messrs. Gleeson and Co., 41, High Street, Watford. Clematis montana would answer very well in the position you describe against a south wall. It is probable that you will find Escallonia macrantha the most suitable shrub for your arch. E. langleyensis would grow more rapidly, but it is of looser habit and not so strictly evergreen. It is, however, a very beautiful shrub. Both Escallonias give excellent results in Cornwall.

ZEPHYRINE DROUHIN AS A WALL ROSE (Mrs. Sherrard).—We should not select this beautiful Rose for a house climber. It will, in the course of five or six years, attain a height of 10 feet to 12 feet; but its best position is against a fence or pole, where it can grow to a height of 6 feet to 8 feet, as it is more inclined to become bushy than tall. A good wall Rose would be Dr. Rouges. It is a glorious rich colour, or, if you would like a pale colour, Climbing White Maman Cochet or Climbing K. A. Victoria would be fine. Rather than remove the Rose, why not plant a standard of some good climber close to it, one that would soon cover the vacant space? We would suggest for this purpose Climbing Mrs. W. J. Grant, and most growers can supply such Roses in standard form.

DISEASED ROSE AND CELERY LEAVES (Dr. A. R. W.).—The Rose leaves are attacked by the Rose black spot, and the best treatment is to spray the bushes with Bordeaux mixture from early May onwards at intervals of a fortnight or three weeks. The cause of the spot is a fungus called Actinonema rosæ, and the spray treatment should be combined with the destruction of all the diseased foliage possible. The Celery is attacked by the Celery leaf spot, due to the fungus Septoria Petroselinii Apii, which has become so prevalent during the last few years. It is usually distributed by the seed, and the only thing to do now is to pick off all the affected parts and spray the remainder with Bordeaux mixture. The spraying should be commenced early next season, and every endeavour made to get the seed free from the fungus.

SUBSTITUTE FOR NATURAL MANURE (New Reader).—We quite appreciate your difficulty in obtaining natural manure for your new Rose-beds. In towns, and even in the country, it becomes increasingly difficult each year owing to motors displacing horses to so large an extent. We do not know of any better substitute for adding to the soil when preparing new beds than Wakeley's Hop Manure. We have used it extensively for several years with excellent results. The spent Hops which form its basis add humus to the soil, and this is particularly necessary and valuable. In addition, the Hops have been treated with lasting chemical plant food, so that beneficial results are obtained over a comparatively long period. You will find this manure advertised in our pages, and we advise you, and others similarly situated, to give it a trial.

ROSES OF GOOD SUBSTANCE (A. P. F. G.).—We can quite appreciate your desire to plant Roses of good substance, especially after a season like the present. Unfortunately, a number of Roses are wanting in fulness, and yet in the autumn days they are the most beautiful and open more readily than the double kinds. You will find the following good varieties, and they are all Hybrid Teas, as you desire: Deep red—Florence H. Veitch, Lieutenant Chauré, General Macarthur, George Dickson. Liberty and Chateau de Clos Vougeot; pink—Countess of Shaftesbury, Joseph Hill, Lady Ashtown, Mme. Abel Chatenay, Mme. Segond Weber and Mrs. George Shawyer; cream and white—Mrs. Arthur Munt, Ophelia, Molly Sharman Crawford, British Queen, May-flower and Souvenir du Président; yellow—Le Progrès, Sunburst, Souvenir de G. Prat, Mrs. Aaron Ward, Melody, and Herzogin Marie Antoinette.

THE GARDEN.

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OCTOBER 17, 1914.

NOTES OF THE WEEK.

Our Garden Planning Competition.—It is with pleasure that we announce in this issue the results of our competition for planning and planting the little garden. The selection of the winning designs has involved a considerable amount of labour, and we hope that those published this week will be of assistance to our readers who are contemplating the alteration of their gardens or the planning of new ones. Next week we shall publish more of the prize designs, with explanatory notes and criticisms of their respective features. We feel sure that our readers will agree that the competition has been more than justified by the results achieved.

War Fund Fruit Sale at Covent Garden.—Fruit sales are common enough at Covent Garden, but on Wednesday, October 7, a sale took place the like of which even the oldest salesman had never seen before. A remarkably fine lot of British and foreign fruit had been gathered together—gifts from growers, merchants and private people—and the spacious hall was crowded to its utmost capacity with people who appeared eager to spend as much money as they possibly could, the sole object being to swell the Relief Funds, which benefited to the extent of £310 18s. 6d. The keenest business men in the market made the bidding, and ran up prices to many times the actual value of the lots, and frequently, when lots were knocked down, the purchaser would call out to the auctioneer to "sell them again." The crowning lot of all was one large Peasgood's Nonsuch Apple, which weighed 30oz. The first bid was £5, but the grand figure of £55 was reached in a few minutes, the purchasers being Messrs. Adam and Co., Bond Street. Fifty-five shillings for a dozen Peaches, £3 15s. for three Pumpkins, £4 5s. for eighteen Apples, and 6 guineas for a basket of mixed fruit were among the average prices realised, and, when everything else was sold, the auctioneer offered his hammer, which brought in another 5 guineas.

Apples in America.—The Apple crop in the Montana, Idaho, Washington, Oregon and California districts, according to the United States Department of Agriculture, is estimated at 18,600,000 bushels, but the Fruit Exchange and papers claim that the production will not exceed 10,700,000 bushels. The prices are very low compared with last year, Jonathan Apples being bought from the grower at 3s. 1d. per bushel, while last year the same two first grades were worth 5s. 2d. per bushel.

Royal Horticultural Society's Exhibitions.—The Rev. W. Wilks informs us that unless some exceptional crisis occurs, the exhibitions of the society will be continued in the Royal Horticultural Society's Hall at Vincent Square, and the year's programme, as it appears in the Book of Arrangements for 1914, be completed.

A Good Single Dahlia.—One of the best single Dahlias for bedding is named Little Othello. This has a fine, branching habit, and flowers very freely over a long period.



A BOWL OF HYACINTHS GROWING IN FIBRE.

The blooms are not over-large and bright scarlet in colour, the dark, bronze green foliage making an excellent foil for the flowers. It is worth making a note of for planting next spring.

Rose Mrs. A. R. Waddell in Autumn.

Although the flowers of this charming Rose come nearly white during the hot days of summer, they are particularly charming in the autumn, when they are freely produced by established plants. At this season they come a beautiful

shade of rich apricot yellow, and are worth growing for their colour alone. The bushes are moderately vigorous and not over-addicted to mildew. This Rose was raised by M. Pernet-Ducher and sent out in 1908.

Flower-Beds for the Spring.—Now that the time for planting beds for spring effects is with us, we would draw the attention of our readers to the article on this subject which appears on page 503. This is written by Mr. J. B. Stevenson, the head-gardener to the Bournemouth Corporation. Visitors to that Southern resort will remember the beautiful effects obtained by Mr. Stevenson in the Chine Gardens and many other open spaces, where the flower-beds, both in the spring and summer, are generally admitted to be among the finest in the country. In our next issue we hope to publish details of the arrangement of the plants by Mr. Stevenson.

Belladonna Lilies and Zephyranthes candida.—One of the most charming features at Kew just now is a long, narrow border, under the south wall of House No. 1, that is filled with the Belladonna Lily, Amaryllis Belladonna, and edged with a double row of Zephyranthes candida. The pink flowers of the Belladonna Lilies are particularly good, and harmonise well with the white blooms of the Zephyranthes. The green, Rush-like foliage of the latter makes an excellent foil for both, and does away to some extent with the bareness that would otherwise prevail on account of the natural absence of the Amaryllis foliage at this season.

Hyacinths in Glazed Bowls.—The illustration on this page serves to remind us that it is quite time that all bulbs to be grown in glazed bowls filled with fibre should be put in without further delay. The process, which is really very simple, has been so often dealt with in detail in our pages that it is not necessary now to say much about

it. The fibre should be nicely wet, not sodden, and the bulbs placed so that they nearly, but not quite, touch each other. When completed, the "nose" of each ought to be showing just above the surface of the fibre. Although large bedding Hyacinths are so often used, we prefer the more graceful miniature set, bulbs of which can be purchased from any of our advertisers. Daffodils, Tulips, Snowdrops, Crocuses, Fritillaries and, indeed, almost any kind of bulb can also be grown in bowls of fibre.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Recipe for Green Tomato Pickle.—Place two and a-half pounds of sliced green Tomatoes in a jar, and sprinkle salt over each layer of slices; let them remain twelve hours, drain off the salt water, and pour over them as much vinegar as will cover them. Add a quarter of a pound of brown sugar, one-eighth of bruised ginger, one-eighth of cloves, one-eighth of mustard seed and a quarter of a teaspoonful of dried chillies. Simmer all together till the Tomatoes are quite soft, then bottle and cork well, and keep in a cool place. **Recipe for ripe Tomato chutney:** One pound of moist sugar, one ounce of ground ginger, half an ounce of salt, half a pound of raisins, two cloves, two large Onions, two pounds of Apples, one pound of Tomatoes, one-eighth of cayenne pepper and one and a-half pints of vinegar. Peel and chop Onions and Apples, stone raisins and chop

mostly planted as reserves in order to obtain, if possible, healthy cuttings. To my surprise these, in the varieties George Home, Crimson Gem and Mrs. F. Fulford, have flowered profusely; the spikes are most handsome and no disease is apparent. I obtained a good stock of cuttings, too, and I have recently lifted all the best plants—there was not space available for all—which had previously been topped. Nice balls of soil were secured to the plants, and they were closely arranged in cutting-boxes. In the meantime, and until severe weather indicates the wisdom of housing them, they are standing in a sheltered position out of doors. They are wintered in a slightly warm structure. The cuttings root with the greatest facility in a propagating-pit.—R. P. BROTHERSTON.

Kniphofia caulescens.—There are one or two species of Kniphofias that differ from the majority by their caulescent habit. One of the most distinct of these is *Kniphofia caulescens*, with its large rosettes of glaucous foliage, which are borne on stems often 3 feet from the ground, until their weight pulls them over, when they

juice is gone again, but not dried up. Then pour on enough vinegar to cover them, with a little mace, peppercorns and a little cayenne pepper if preferred; make them boil about three minutes; then turn out and cover.—ANNE AMATEUR.

A Heavy Crop of Melons.—The following may interest your readers: Sixty-one Melons, weighing altogether 105lb., were grown in a cold frame (four-light). The plants were raised from seed of Sutton's Ar and Emerald Gem, and were grown by Mr. Watkins, gardener to Dr. and Mrs. Armstrong-Jones, Plas Dinas, Carnarvon, North Wales.—C. W.

Royal Horticultural Society's Fruit Show.—It was with very great regret that the Council were compelled to abandon the British-grown Fruit Show fixed for September 29, but the military were then in occupation of the hall, and no other suitable hall could be discovered which was not similarly occupied. The Council have now received an assurance that their hall will not be further taken over except under pressure of some altogether unexpected and grave crisis in affairs, so that we may now with a fair amount of confidence resume our regular meetings and shows. It is now too late to attempt to reorganise the whole of the fruit show according to the published schedule, but under the peculiar circumstances the Council think it a good opportunity to draw attention to the more definitely late-keeping varieties of British hardy fruit. They therefore specially invite exhibits of such, both as collections and as single dishes, on Tuesday, December 1. No schedule will be issued, but the Council will make such awards as they think fit. They are anxious to utilise this opportunity of laying stress on the really and naturally late-keeping varieties, and, consequently, will not look with favour on earlier varieties, either artificially or with great and exceptional care, kept back out of season.—W. WILKS, Secretary.

Belladonna Lilies in Ireland.—We have grown these for many years, but I think this has been a record season for flowering. On a patch of ground in a very dry border, and less than two yards square, a group of plants has produced eighty flower-spikes, carrying from six to seven blooms on each, almost all of which are now fully expanded and a sight not easily forgotten. The flowers vary from almost pure white to a reddish hue. They flourish in a rich, deep, sandy soil, and the best time to plant a stock is June. They should not be again disturbed for years, and will ultimately establish themselves and produce masses of blossom. All that is necessary in the growing season is to give them a few good waterings of clear water and an occasional watering with liquid manure. The leaves and flowers do not come together; the former are produced in the early spring, and should be in some way protected from frost, as they are not quite hardy. We had a fresh supply of bulbs of this Lily given us by the late Lord Wolseley, who brought them from South Africa. They differ slightly from those we have previously grown, and have bloomed equally as well, the colour of the flowers being of a deeper shade of pink and somewhat smaller. All the leading botanists agree that *Amaryllis Belladonna* was introduced into the British Isles from the West Indies in 1712, and it is very probable that it was brought from England to the Cape of Good Hope, but we have no authentic information as to its being ever found growing naturally there.—SAMUEL BRYAN, *The Gardens, Fortfield House, Terenure, County Dublin.*



KNIPHOFIA CAULESCENS IN THE CAMBRIDGE BOTANIC GARDEN.

fine, skin Tomatoes; mix all ingredients together and boil until tender; time, about two and a-half hours; quantity, six pounds.—R. A. CARTER.

The Rock Garden in Late Autumn.—I saw in your issue of THE GARDEN for October 3 a paragraph on flowering plants in the rock garden at Kew, and I think you may be interested in the following list of plants now flowering in my rock garden here, which is situated 900 feet above sea-level, in peat soil, and made in October, 1913: *Violas* (mauve and white), *Aubrietias* (purple, mauve and Fire King), *Phlox amoena*, *Saxifraga aizoides rubens*, *Helianthemums* (rose, scarlet and white), *Veronica rupestris*, *Verbena*, *Sedum pulchellum*, *Achillea Kellereri*, *Primula cashmeriana*, *Sempervivum Fauconettii*, *Thymus alpinus*, *Calamintha* and *Crocus speciosus Aitchisonii*.—(Mrs.) LORNA WILSON, *Huccaby House, Princetown, South Devon.*

A Note on Pentstemons.—During a very long period I have had great difficulty in keeping named Pentstemons, the plants becoming diseased throughout the flowering stage, and shoots for cuttings failing to be produced. In spring I rooted a large number of shoots provided by old plants preserved over the winter, and these were

root along the stem, the crowns again commence to grow up, and in this way they soon form a large mass. Though less brilliant than most of the other Flame Flowers, it is quite an attractive plant with its glaucous, blue-grey foliage, which is ornamental the whole year through, while in June it produces on scapes, from 4 feet to 5 feet high, dense heads of flowers 12 inches to 18 inches in length, which are reddish salmon in their early stage, the flowers when fully expanded gradually becoming white, tinged with greenish yellow, and producing an effective contrast. It is a native of South Africa, whence it is said to have been introduced in 1862 from the Stormbergen Mountains. Seeds are produced quite freely, but, like those of many other liliaceous plants, should be sown as soon as ripe, while suckers or offsets root freely if taken off and put in sand in a cool frame early in the autumn or in the spring.—F. G. PRESTON, *Cambridge Botanic Garden.*

Pickled Mushrooms.—Mrs. Hobden's recipe: With a piece of coarse flannel and salt rub each Mushroom well (which must be buttons); then thoroughly dry them, put them in a saucepan (with a sprinkling of salt to make the juice run) over a slow fire. Let them simmer until the

SOME HINTS ON SPRING BEDDING.

THE planting of spring-flowering plants in beds and borders is becoming more fashionable each year. From the numerous enquiries I receive respecting the various plants used in the public gardens here, and how they are prepared and planted, I think a short article on the subject in your valuable paper would be acceptable. The variety of plants and bulbs used here is not very large. The aim has been to use only such plants as are easily produced in quantity and the cheaper varieties of Tulips, Hyacinths and Narcissi. The following are the principal plants I use, viz., Wallflowers, Polyanthuses, Daisies, Myosotis and Violas, Alyssum, Aubrietias and double Arabis.

Wallflowers are grown from seed sown in drills 1 foot apart at the end of April or the first week in May. I may state that the soil is light, and, previous to sowing the seed, the ground is trod firmly and raked with a wooden rake. The young seedlings are above the ground in a few days, and the Dutch hoe is freely used until they are ready for transplanting. During June the ground is dug in readiness for their reception, only a small quantity of manure being used. Lime and wood ashes are added when necessary. When the plants are 4 inches to 6 inches high, the prepared ground is harrowed with a small harrow, rolled with a light roller, and again harrowed. Firm ground, with the use of soot and lime, is the best antidote for the prevention of club-root. The plants are put in rows 1 foot apart and 6 inches from plant to plant. If the weather is dry, they are given a good watering (there is no waiting for rain). The Dutch hoe is freely used; and they make large bushy plants by the middle of October.

Polyanthuses are raised from seed sown in boxes in February and placed in a cold frame. As soon as the seedlings are large enough, they are pricked out in other boxes and stood outside, and afterwards planted in rows similarly to Wallflowers. As Polyanthuses are gross feeders, a heavier dressing of manure is given where they are planted.

Daisies.—These are sown in June in boxes, placed in a cold frame, pricked off in other boxes, and afterwards planted in beds 4 feet wide and 6 inches from plant to plant.

Myosotis is sown in July on a shady border, and afterwards planted out in rows 9 inches wide and 6 inches apart in the row. In sowing the seed of Myosotis, care should be taken not to cover it too deeply. Scatter the seed thinly, beat the bed with the back of a shovel or spade, and give a very slight sprinkling of fine sifted soil.

Pansies and Violas are grown from seed sown early in June. Treated in the same way as Daisies, they are in flower when planted out in their permanent quarters in October.

Alyssum is also grown from seed sown in boxes in March. When large enough the seedlings are pricked off in other boxes and afterwards planted in rows the same as Polyanthuses. These make fine plants by October.

Aubrietias are grown from division in March and August. In March store plants are lifted, their long roots shortened and divided into pieces of several shoots each, and planted in rows 1 foot apart and 6 inches from plant to plant. A few

weeks later the rows of plants are well trodden with the foot on each side. The plants soon grow away and are usually in fine flower in June. In July the tops are cut off with sheep shears, leaving them 2 inches to 3 inches high. These soon break out and make fine bushy plants, 6 inches to 8 inches through, by October. Those divided in August are the plants taken from the flower-beds in June. Before lifting, the tops are cut off, as above. After lifting, the roots are well cut back and the plants laid thickly in rows in a shady place. By the end of July these have broken out nicely, and are then divided and planted out in nursery beds in a similar way to Daisies. These also make fine plants, but not so large as those divided in March. Aubrietias can also be grown from seed, but they seldom come true; nevertheless, they make a nice bed, if not so uniform. Sow the seed in boxes in April and treat in a similar way to Pansies and Violas, and the result will be good plants at the same time as those from division.

Double Arabis is grown from cuttings put in boxes in July and placed in a frame, kept moist and shaded, and afterwards planted out in rows like Myosotis. The cuttings are taken from reserve plants that have been cut down close to the ground after flowering. The young growths, about three inches long, are used as cuttings. Good plants can also be grown from pieces of the old plants dibbled in in rows on a shady border in July.

J. B. STEVENSON.

Chine Gardens, Bournemouth.

(To be continued.)

SWEET PEA GROWING CONSIDERED.

"The best laid schemes o' mice and men
Gang aft agley."

TO-DAY should have been spent at a Dahlia show, but the war has caused it to be cancelled, therefore I have seized the opportunity for a day's recuperation and enjoyment in the glories of a garden. And what a perfect day it is! An azure sky dotted with fleecy clouds, a softly sighing south wind and a brilliant sky belie the calendar; while the lawn, transformed by the recent showers, and the Rose-beds still rich in abundance of beautiful flowers, combine to delude one that it is a June day. Close by one hears the hum of bees working among the Honeysuckle and Jasmine on the archways; and why does a fully painted Admiral butterfly need to settle beside one and turn one's mind to other scenes where war and not peace reigns? Yet as one's gaze wanders to a few clumps of Sweet Peas still carrying a few blossoms, one turns from dreams to realities. Will all be well with our favourite? Will people become too economical and neglect their gardens and forget that business must be carried on as usual? With such thoughts breaking in upon my musings I cannot resist taking my pen, and I hope these few words will exhort those Sweet Pea lovers who know the worth of their favourite to send immediately to the seedsman an order, and, as far as possible, to accompany that order with a settlement of all former accounts, for it is only by these means that business can be carried on through the troublesome days that lie before us. The war will affect everyone, but each can do his

share to co-operate with his brother that we suffer together, and later on we shall also reap the harvest of Peace together. Before, however, I introduce you to my best friends, I would tell you especially that if you do not appreciate Sweet Peas as you should, you are missing so very much that helps to make the joys of life richer and more abundant.

It may be that the war will continue for many months, and the toll of brave fellows it will take will undoubtedly be heavy. Consider, then, the amount of pleasure you will be able to give those sufferers if you can supply them with abundance of flowers. The study and contemplation of the beautiful in any of its manifold forms is always an absorbing interest, but when beauty is materialised in a bunch of Sweet Peas, then it becomes, beyond measure, more fascinating. We also know that every beautiful thing transmits, by a marvellously subtle power, its influence all around; so to those who are seeking some small way of helping their country I suggest that they maintain their gardens as before, and, if possible, grow more Sweet Peas, for no flower has a greater charm nor a more benign influence.

Of course, to attain personally this admiration for and love of Sweet Peas, it goes without saying that one must be thoroughly acquainted with the different varieties individually, and this is impossible until you have grown them more or less indifferently, have experienced the shocks of keen disappointment, and likewise have tasted the ecstatic thrills of success. And it is this which makes Sweet Pea growing so wholesome and energising, physically and morally. You cannot grow Sweet Peas without trouble, and the fascinating expectancy which compels one to get up "with the lark" to see whether one's efforts have been crowned with success ever urges one onwards to greater heights. There is, therefore, no finality in Sweet Pea growing. Having succeeded with one variety we select another, and each year brings a new friend to be cherished and firmly established in our affections. Thus grows the boundaries of the heart, until the whole world of flowers is enthroned and beauty envelops us on every side.

Yet there is a risk in Sweet Pea growing, and the risk is that it may so enthrall us that we chafe at the winter frosts which destroy our favourites out of doors. But this is a risk to be approved and fostered, as the Sweet Pea is so amenable to all kind culture that it will flourish under glass at Christmas and onwards, and, combined with the winter-flowering varieties that are now being put upon the market, a perpetual supply of flowers all the year can be maintained.

I hope I have said enough to convince all readers of the intrinsic value of the Sweet Pea, and for those who have not yet fallen under the yoke and thralldom of the Queen of Annuals I add a few words of cultural guidance.

Seed.—It is essential that seed be procured from a firm of established repute. Unfortunately, the "boom" in Sweet Peas created many "jerry growers," whose one aim was to get rich quickly, and they foisted on the market such "mixtures" which well-nigh destroyed the faith of many. Firms whose advertisements appear in *THE GARDEN* can be relied upon, and an order, with remittance, should be posted without delay to the one selected. In choosing varieties, whose name is legion, the beginner should be guided either by the seedsman or some Sweet Pea lover

who knows what is best. I suggest the following to one who intends growing for a plentiful supply of decorative blossoms: Etta Dyke or King White, Maud Holmes, R. F. Felton, Rosabelle, Lavender George Herbert, Elsie Herbert, Lord Nelson Spencer, King Manoel, Hercules, Elfrida Pearson, Mrs. Cuthbertson and Margaret Atlee. Undoubtedly the pinks are the most popular, and I have excluded all salmon and fancy varieties, as I do not consider them (beautiful as they are) suitable for garden decorative display.



WISTARIA CHINENSIS GROWING OVER A GRANARY.

In former notes I have dealt fully with the advantages of autumn sowing and the need for deep cultivation of the soil, but I would add that, for ordinary purposes, Sweet Peas will thrive well if given fair conditions and ordinary culture. For exhibition flowers rich soil is necessary, but everyone can grow good Sweet Peas if he learns to love them and give them ordinary care. A little too much attention has been given to the Sweet Pea from the exhibition standpoint, and while not lessening in a single degree the value of the Sweet Pea as an exhibition flower, yet one would like to emphasise the fact that the Sweet Pea is essentially a garden decorative flower, and as such cannot be excelled by any other. In the future, when so much joy may possibly be the outcome of a bunch of Sweet Peas, this will be lacking if the ordering and planting of seeds is not done as usual. The war necessitates the curtailing of luxuries, but the supply of the garden is no luxury, rather a necessity. Let us each look ahead and see the ultimate issue of Right over Might, and contribute our share by maintaining a full and plenteous garden. S. M. CROW.

SOME RECENTLY INTRODUCED SWEET-SCENTED ROSES.

(Continued from page 492.)

Alice de Rothschild (1910) is a good yellow Tea Rose with something of the Maréchal Niel colour and scent.

Claudius (1910), a gold medal Rose, is of moderate, rather stumpy growth, with large flowers of bright rose colour and of true Rose scent.

Mrs. H. E. Coxhead (1910), a gold medal Rose, though of fine form and delicious fragrance, is of such a dull magenta red shade that a standard or two is as much as one cares to have of it in the garden. Sometimes in October or November the buds come a brighter colour.

Lady Hillingdon and **Mrs. Foley Hobbs** (both introduced in 1910) have quickly made their way into our gardens, the one for the sake of its deep orange flowers and ruddy foliage, the other for its occasionally perfectly shaped ivory white blooms so useful to the exhibitor. Both have a very delicate and pleasant Tea scent.

Rayon d'Or (1910), the wonderful yellow Rose of M. Pernet-Ducher's, has a very pleasing fragrance, reminiscent of ripe Apricots.

The year 1911 produced several fragrant Roses.

Desdemona. — Deep pink. A strong grower.

Edward Mawley. — A gold medal Rose. Rich crimson, shaded blackish scarlet. Might be a good doer where it can be kept free of black spot, to which it seems specially prone.

Elizabeth. — Another pink Rose of more refined shape than Desdemona.

Florence Haswell Veitch. — A vigorous grower, doing well as a dwarf pillar. It has good dark green foliage and well-shaped scarlet-crimson flowers.

Mrs. Edward Powell. — A delightful bedding Rose of vigorous, upright habit, splendid metallic-hued foliage, and very bright red, sweet-scented blooms. The fragrance of Mrs. E. Paull is quite distinct, very decided, and though not so sweet as that of Richmond, is most refreshing.

The year 1912 appears to have added only one Rose to my list, and that is

George Dickson, a very strong-growing Hybrid Tea. In many respects it is more like a Hybrid Perpetual. It has massive, fragrant blooms of velvety crimson, often marked with a splash of white. Unfortunately, it is rather apt to hang its head, very apt to be attacked by mildew, and is not free in the autumn.

The last two varieties I have noticed as being specially fragrant are Mrs. Andrew Carnegie and H. E. Richardson. They are 1913 Roses, and so, unlike the others I have mentioned, have not been grown in my own garden, but I have seen and smelt them at a good many shows.

Mrs. Andrew Carnegie, a gold medal Rose, is an exhibition Rose only, I fear. Its huge lemon yellow blooms are made up of masses of thin petals, which I feel sure would not stand much "weather." It was called, when first shown, the sweet-scented Frau Karl Druschki, and it will probably be disappointing to many to find that it has not Frau Karl Druschki's vigour and rain-resisting qualities.

H. E. Richardson, a deep crimson Rose, was well shown at the National Rose Society's autumn show last September. If I remember rightly, a market basket was filled with its deliciously fragrant blooms. I was told that it is disappointing in the garden, but the colour was so good and the scent so surpassingly sweet that when it can be bought for a couple of shillings it will be well worth trying by those who, like myself, look upon fragrance as one of the most endearing qualities of the Rose.

WHITE LADY.

SOME GOOD ROSES FOR HEDGES.

IN recent years there has been an increasing demand for Roses of vigorous habit suitable for growing as low, informal hedges. In many good gardens now it is usual to find a hedge of this kind forming a boundary to the Rose garden or a dividing line between kitchen and flower gardens, and when suitably placed and the right varieties selected, few features are capable of providing such pleasing and harmonious results. The Sweet Briars and the Hybrid Penzance Briars have for a long time been used for this purpose, almost to the exclusion of other varieties, and, beautiful and suitable as they are, these single-flowered fugacious kinds do not meet everyone's requirements. There are a good many large-flowered Roses well adapted for planting as informal hedges. One of the best, and one that is not grown half so much as it ought to be, is the Thornless Rose, Zephyrine Drouhin. It quickly forms a tall bush or small pillar, and flowers freely, both in summer and autumn, its deliciously fragrant blossoms possessing a charming shade of bright rose pink such as we get in no other variety.

A small hedge that I planted three years ago is composed of Grüss an Teplitz and Gloire de Dijon. The bushes are now over 6 feet high, although when planted they were pruned within a few inches of the soil. The varieties were planted alternately, about fifteen inches apart, and from the end of May until well into November are never without flowers. Apart from the beautiful effect in the garden, this hedge yielded an abundance of good blooms for cutting. Although Gloire de Dijon is a Tea Rose, it is quite hardy, is one of the earliest to start flowering and almost the last to finish. These attributes and its delicious Tea scent more than outweigh the faulty shape of many of the blossoms, a drawback that condemns it in the eyes of many ardent rosarians. Grüss an Teplitz, with its large bunches of scarlet, fragrant flowers, is too well known and appreciated to need further comment. J. B. Clark, with large crimson

flowers; Longworth Rambler, bright cerise; Warrior, crimson scarlet; W. A. Richardson, apricot yellow; Gustave Regis, nankeen; Mme. Isaac Pereire, a fine old, sweetly scented Bourbon Rose of pink shade; Conrad F. Meyer, soft pink, very large flowers; and Blanc Double de Coubert, white, are a few other more or less large-flowered Roses that might with advantage be used for hedges such as we now have under notice.

These hedges are by no means difficult to manage, but it certainly pays to thoroughly prepare the soil before planting. Deep cultivation, thorough manuring with good farmyard manure, and a handful of bone-meal mixed in the top 6 inches for every bush, will result in rapid yet sturdy growth that will form a perfect screen in two years. With some of the very strong-growing varieties, such as Gloire de Dijon and Conrad F. Meyer, it is often necessary to put in a few short, stout stakes, and then bend over the longest rods and tie the ends to the stakes. This induces the side buds to burst freely, and a bountiful supply of flowers is ensured. So far as pruning is concerned, the less done in reason the better, except when the bushes are newly planted, when they should be cut almost to the ground level. When established, the cutting away, close to the soil, of some of the oldest wood each year induces the formation of sturdy new rods that keep the bushes in good condition.

H.

FLOWERING CLIMBERS OVER FARM BUILDINGS.

(WISTARIA CHINENSIS AND CLEMATIS MONTANA.)

IT is not until *Wistaria chinensis* attains a good age that it flowers in the greatest profusion, and it is when growing over old buildings that it is seen to advantage, for the atmosphere of age enhances its beauty in no small degree. Happily, the *Wistaria* presents no great difficulties in cultivation. It shows a preference for a deep, loamy soil and a sunny wall, and when once established it grows freely and flowers abundantly. Occasionally in this country it produces seeds, and these are borne in pods resembling Kidney Beans. Sowing seeds is a slow and uncertain method of raising plants, and the mode of propagation usually adopted is to layer the growths produced near to the base of the plants. Layering is best done in the summer, after the flowers are over.

Clematis montana is another beautiful climber, equally at home on the roof of an old building. Both climbers flower at the same time, and they are unsurpassed for beauty and effect. The two accompanying pictures were taken at Summer Farm, West Clandon, early in June. The *Wistaria* is seen growing over a disused granary, while the Mountain Clematis looks very picturesque flowering in almost wild profusion on the roof of an old barn against the dense background of fine old Elm trees. Considering the ease with which *Clematis montana* may be grown in this country, it might almost be imagined to be a native of Britain, instead of which it was introduced from Nepaul in 1831. It is a capital subject for growing over balconies and porches, and it looks very effective if allowed to ramble at will over Pine trees, when the light star-like flowers are shown up in marked contrast to the dark foliage of the conifers. This *Clematis* does well in almost any position, and is not in the least fastidious about soil.

C. Q.

BULBS FOR THE ROCK GARDEN.

DURING the early spring months, and even well into the summer, our rock gardens owe not a little of their charm and interest to the many dwarf kinds of bulbous plants that find a congenial home in the pockets or bays where a goodly depth of loam or peat and loam can be provided for their roots to wander in. Nearly every post now brings catalogues of bulbs, a sure sign that the planting season is at hand; and as a great deal depends upon early planting, it is proposed to enumerate some at least of the many kinds suitable for the alpine garden.

The *Scilla* family alone provides us with several gems that cannot be omitted. The Siberian Squill, *Scilla sibirica*, with rich blue flowers, and its white variety are two plants that will thrive in almost any position where a few inches of good soil can be lodged. *Puschkinia libanotica* is a near relative of these; it grows taller and flowers later, but must be included on account of the quaint china blue markings on its white petals. Then we must not forget the Glory of the Snow, *Chionodoxa Luciliae*, with pale blue flowers, and the rich dark blue variety named *sardensis*. They are both easily cultivated, and seed freely when once established. Of *Anemones* there are a number to select from. The Wood Windflower, *A. nemerosa*, with its lavender-flowered variety *robinsoniana* and the large-flowered Blue Bonnet, should have a partly shaded position and some decayed leaves in the soil. Then there is the Apennine Windflower, *A. apennina*, and the Grecian Windflower, *A. blanda*, both with blue flowers and both admirably adapted for the rock garden. The well-drained places in the rock garden that can easily be filled with good soil make a suitable home for that most gorgeous of Windflowers, *A. fulgens*, which, if protected from north

and east winds, may often be had in flower at Christmas. It is not a kind plant, however, and cannot be relied upon to do well, even under the most favourable conditions. Where it does grow, however, it usually grows well, and is worthy of a trial for the sake of its scarlet blossoms.

Of *Crocuses* there are a number of species admirably adapted for the rock garden. To my mind, the gem of all is *Sieberi*, with soft lavender flowers and bright orange stigmata. In a sheltered corner it begins to flower in January, and continues

for at least a month. Then there is the charming little *C. susiana*, with golden yellow flowers quaintly striped on the outside with maroon. It increases freely when established if left undisturbed. *C. biflorus*, white, with violet markings, and *C. tommasinianus*, with soft silvery lavender grey flowers, are others that certainly ought to be included. Of hardy *Cyclamen* suitable for autumn planting, there are three, viz., *C. cilicicum*, with white flowers; *C. Coum*, rose-coloured blossoms; and *C. ibericum*, which is similar to *C. Coum*, except that the foliage is veined with silver. These ought to be planted at once, and it is well to bear in mind that they appreciate decayed leaves and old mortar in the soil. The Winter Aconite, *Eranthis hyemalis*, ought also to have a corner. It is usually regarded as a common plant, but if the curious little roots are put in now, we shall be rewarded in midwinter with flowers of rich buttercup yellow, each surrounded by a quaint ruff of green foliage. Snowdrops of several kinds are available, though, to my mind, none is more suitable than the common one, *Galanthus nivalis*. Of the wild Tulips of other countries, there are

THE MOUNTAIN CLEMATIS (*C. MONTANA*) VEILING AN OLD BARN

several beautiful and interesting kinds suitable for our purpose, the most charming of all being the Water Lily Tulip, *Tulipa kaufmanniana*. It has creamy white flowers with rich yellow centres, and when fully expanded these resemble miniature Water Lilies. It needs good soil and a sunny position. The Persian Tulip, *T. persica*, which rarely grows more than 3 inches high, is a gem for the rock garden; it has yellow flowers with golden bronze exteriors. Dog's-tooth Violets are a fairly large family, and of the common one, *Erythronium Dens-canis*, which has purple flowers,

there are a number of varieties, Frans Hals, with large purple blossoms, and La Neige, white, being two of the best. They appreciate a partially shaded position and rather deep planting. *E. californicum*, pale yellow; *E. Hendersonii*, pale lilac, with purple centre; *E. Hartwegii*, pale yellow; and *E. revolutum Johnsonii*, rose with yellow centre, are all beautiful kinds from America. Dwarf Irises, such as *I. Heldreichii*, with lavender and violet flowers; and *I. reticulata*, with deep violet-coloured blossoms that emit a delightful fragrance, must find a home in the rock garden.

The Grape Hyacinths, or *Muscari*, are most useful for creating bold masses of colour, particularly the one known as Heavenly Blue. If planted freely in good-sized drifts it will make a picture of gentian blue in spring that will more than repay us for the slight trouble that planting entails.

Of dwarf *Narcissi* there are many kinds, though none is quite so charming as the dainty little *minimus*, a perfect Daffodil of pygmy size and golden yellow colour. *Cyclamineus*, minor, *juncifolius*, *moschatus*, *triandrus calathinus* and *Queen of Spain* are others that ought to be included. S. X.

THE SNOWDROP.

OF all the flowers that come to us in the early days of the year, none is more highly appreciated than the Snowdrop.

The simplicity of its pure, glistening white blossoms, swaying, sometimes none too gently, in the cutting winds of winter, appeals to young and old alike, and it is a flower that has not, so far as I know, a single human enemy. Nor is it one that has any bad traits, unless the tendency of the bulbs of such species as *Elwesii* to die out under any except the most favourable conditions can be regarded as one. Indeed, the Snowdrop is one of the easiest of our hardy plants to cultivate, and will thrive for several years at least under the most adverse conditions.

Undoubtedly the most effective place for this dainty little flower is the shrubbery, woodland or grassland, situations where the bulbs can be allowed to remain undisturbed and to multiply and increase in vigour year after year. There is a great charm in the contrast between the massive trunks of Elms and other trees of the woodland and this delicate-looking, though in reality hardy, flower that no other grouping, even that of the shrubbery and grassland, can give us. In the woodland, too, the dead leaves are usually allowed to remain on the ground, there to form miniature drifts that emphasise, as it were, the purity of the whiteness of the Snowdrop blooms.

To the uninitiated all Snowdrops appear much the same, yet there is, on closer investigation, a good deal of difference between the various species, many of which are by no means well known. Our native Snowdrop, *Galanthus nivalis*,

is, naturally, the most common of all, and the best for naturalising in the woodland or grass. It is a variable species, the best-known variety being that with double flowers. There is also an extra large-flowered and strong-growing variety of it known as *G. n. Imperati*, which is worthy of inclusion in every garden, though as yet too choice for naturalising. Another variety of the common Snowdrop, named *G. n. octobrensis*, usually flowers in November, but has a tendency to die out rather quickly in most soils.

Next in popularity to our common Snowdrop is the large and beautiful *G. Elwesii*, a native of Asia Minor. This, like the common Snowdrop, is very variable. It differs from the common

rendering it quite distinct. It does not, however, flower so freely in many places as *G. nivalis* and *G. Elwesii*. There are several other lesser-known species and a great number of varieties, most of which are too rare and expensive to allow of them being generally grown. One of the most beautiful of these is *G. Allenii*, which has very broad, arching leaves and large blossoms. It needs a warmer position than most other Snowdrops. For some years past a few enthusiastic cultivators of these flowers have raised hybrids by crossing several of the species before named, but none of these that I have seen surpass for general utility and beauty the two species *nivalis* and *Elwesii*.

To ensure the bulbs flowering well another year, it is essential that they be well and gradually ripened after their flowering period is over. The earlier they are planted now the better, because the bulbs, being small, suffer considerably if kept out of the soil for any considerable time. Most, or all, of those named can be purchased from any of the dealers who advertise bulbs in THE GARDEN. G. S.



THE WATER LILY TULIP (*TULIPA KAUFMANNIANA*). NOW IS THE TIME TO PLANT.

THE WATER LILY TULIP.

THIS beautiful Tulip is almost, if not quite, the first of its race to open in spring, the blossoms in a normal season being fully developed before

March has departed. It is a delightful Tulip in every respect, and one can only assume that it is because it is not well known that it is so seldom grown. Its botanical name, under which it is usually listed in bulb catalogues, is *Tulipa kaufmanniana*, but owing to the half-opened flowers closely resembling those of a miniature Water Lily, it is often referred to in gardens as the Water Lily Tulip. The petals are deep cream at the uppermost parts, the centre of the flower being rich golden yellow. Frequently the exterior is striped rich carmine, and the blossoms are slightly fragrant. It is not a difficult Tulip to grow, but the bulbs ought to be planted comparatively early, *i.e.*, during September or October, at a depth of about four inches. As its full beauty is

only revealed when the flowers are partly open, it should be planted in a position where the sun can reach it for the greater part of the day. Almost any good garden soil suits it, except that which is waterlogged. In addition to the type plant there is a very beautiful variety named *T. kaufmanniana aurea*. As its varietal name indicates, this has blossoms of rich golden yellow, handsomely feathered on the exterior with scarlet. At present it is too rare for general cultivation outdoors, but it is a charming plant for growing in pots for the conservatory, the bulbs being potted up in ordinary potting soil in September or October and treated in the usual way adopted with other Tulips and Daffodils grown in pots.

The Crimean Snowdrop, *G. plicatus*, is known in many gardens in this country, its rather broad leaves with their plicate or folded back edges

one in having green inner segments and bolder stature, and owing to the latter feature it is, in many gardens, taking the place of *G. nivalis*. It, however, requires lighter soil and is not so useful for planting in grass, the bulbs having a tendency to become blind after they have been planted a few years. The variety known as *G. E. Cassaba* is even more vigorous than the type, the leaves and flower-stems, when grown in the rather heavier soil that it seems to require, frequently attaining a height of 1 foot.

THE LITTLE GARDEN.

RESULTS OF OUR COMPETITION.

AS was no doubt inevitable, the National Crisis, which was at its height during August, prevented some of our readers who had notified their intention of sending in designs from doing so before September 1, the last day of entry. The labours of the Judges in examining the designs received (to the number of about four hundred) were, however, by no means light, and we now have pleasure in printing their report and awards.

WE have examined carefully the designs in THE GARDEN Competition for Planning and Planting the Little Garden. Having taken into account the general conditions laid down, we make the following awards:

FOR SITE No. 1.

- First Prize of 5 guineas** to MR. A. TROYTE GRIFFITH, The Priory Gateway, Malvern.
- Second Prize of 2 guineas** to MR. BURNETT N. K. ORPHOOT, 25, Queensferry Street, Edinburgh.
- Third Prize of 1 guinea** to MISS ELIZABETH LEONARD, 46, Abbot Buildings, Cambridge, Mass., U.S.A.

Book prizes, each to the value of half-a-guinea, to Mr. Kenneth Dalgliesh, 165, Fenchurch Street, E.C.; Miss I. Grant Brown, Castle Hill, Lancaster; Miss Isobel R. Harding, Vilmore Cottage, Petersfield, Hants; Mr. Archie G. Paton, 44, Apsley Street, Partick, Glasgow; Miss B. M. Cory, 9, Elm Grove Road, Ealing, W.; and Mr. George L. Morris, 40, Finsbury Square, E.C.

FOR SITE No. 2.

- First Prize of 5 guineas** to MR. GEORGE L. MORRIS, 40, Finsbury Square, E.C.
- Second Prize of 2 guineas** to MISS I. GRANT BROWN, Castle Hill, Lancaster.
- Third Prize of 1 guinea** to MR. HUGH R. DIXON, 73, Corringham Road, Golders Green, N.W.

Book prizes, each to the value of half-a-guinea, to Miss Norah Geddes, Outlook Tower, Edinburgh; Mr. Kenneth Dalgliesh, 165, Fenchurch Street, E.C.; Mr. H. A. Rowbotham, 3, Onslow Road, New Malden, Surrey; Mr. Walter J. Wills, 139, Barry Road, Dulwich, S.E.; and Mr. John A. Weall, Kimberley Road, Borrowash, Derby.

FOR SITE No. 3.

- First Prize of 5 guineas** to MISS I. GRANT BROWN, Castle Hill, Lancaster.
- Second Prize of 2 guineas** to MISS ELIZABETH LEONARD, 46, Abbot Buildings, Cambridge, Mass., U.S.A.
- Third Prize of 1 guinea** to MR. KENNETH DALGLIESH, 165, Fenchurch Street, E.C.

Book prizes, each to the value of half-a-guinea, to Mr. G. L. Thornton Sharp, 626, Pender Street, W., Vancouver, B.C.; Mr. Hugh Dixon, 73, Corringham Road, Golders Green, N.W.; Miss Norah Geddes, Outlook Tower, Edinburgh; and Mr. Ernest J. Biggs, 215, Antrobus Road, Handsworth, Birmingham.

FOR SITE No. 4.

- First Prize of 5 guineas** to MR. JOHN HATTON, Wentworth Road, Four Oaks, Sutton Coldfield.
- Second Prize of 2 guineas** to MISS ISOBEL HARDING, Vilmore Cottage, Petersfield, Hants.
- Third Prize of 1 guinea** to MR. A. TROYTE GRIFFITH, The Priory Gateway, Malvern.
- Book prizes, each to the value of half-a-guinea, to Mr. Burnett N. K. Orphoot, 25, Queensferry

Street, Edinburgh; Mr. Hugh Dixon, 73, Corringham Road, Golders Green, N.W.; Miss I. Grant Brown, Castle Hill, Lancaster; Miss Norah Geddes, Outlook Tower, Edinburgh; and Mr. G. L. Thornton Sharp, 626, Pender Street, W., Vancouver, B.C.

A high level of merit is shown in the designs to which prizes have been awarded, and we have been impressed by the great care and wide knowledge of practical garden problems which have been exhibited by the competitors.

(Signed) GEORGE DILLISTONE.
F. W. HARVEY.
P. MORLEY HORDER.
LAWRENCE WEAVER.
S. T. WRIGHT."

Cheques for the twelve cash prizes amounting to £33 12s. have been posted to the successful competitors, and the winners of the twenty book prizes have been invited to make their choice from the *Country Life* Library of Gardening.

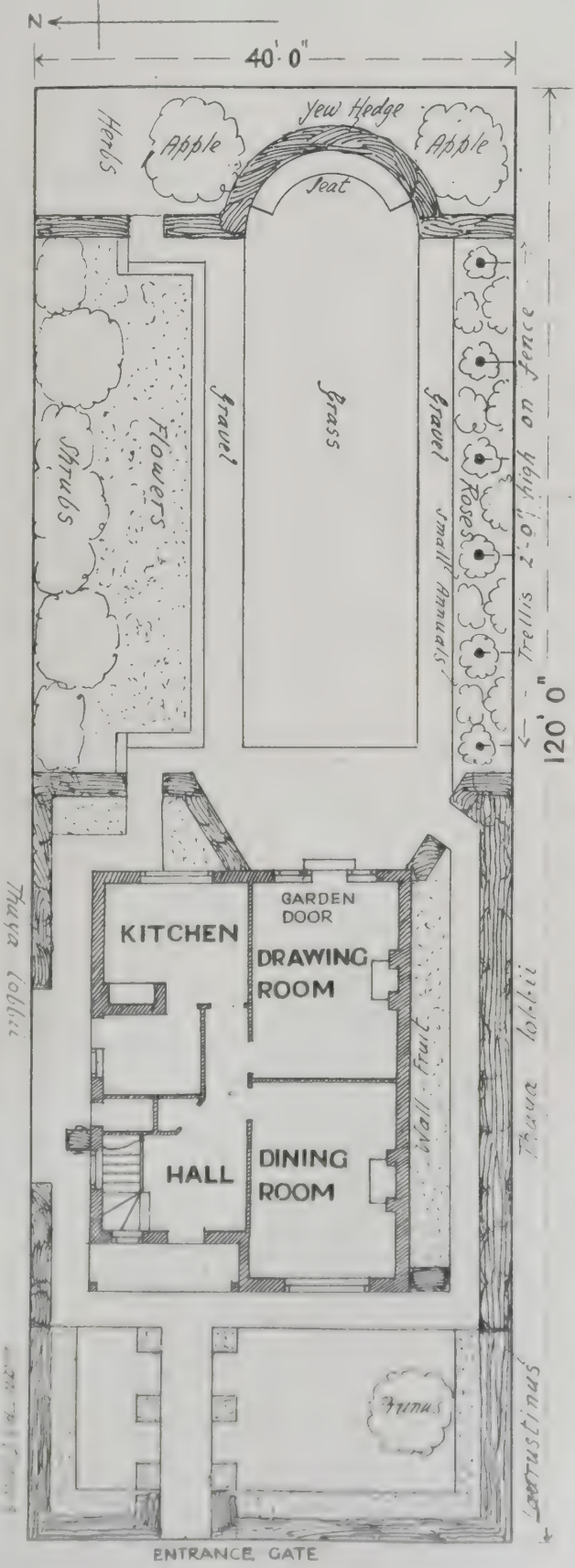
The especial thanks, not only of the Proprietors of THE GARDEN, but also of the competitors, are due to the Judges for the considerable time and pains which they have devoted to the examination of the plans and to the consideration of the awards.

The following articles on the prize plans are contributed by Mr. Lawrence Weaver, Architectural Editor of *Country Life*; by Mr. George Dillistone; and by Mr. F. W. Harvey, Editor of THE GARDEN, three of the five Judges.

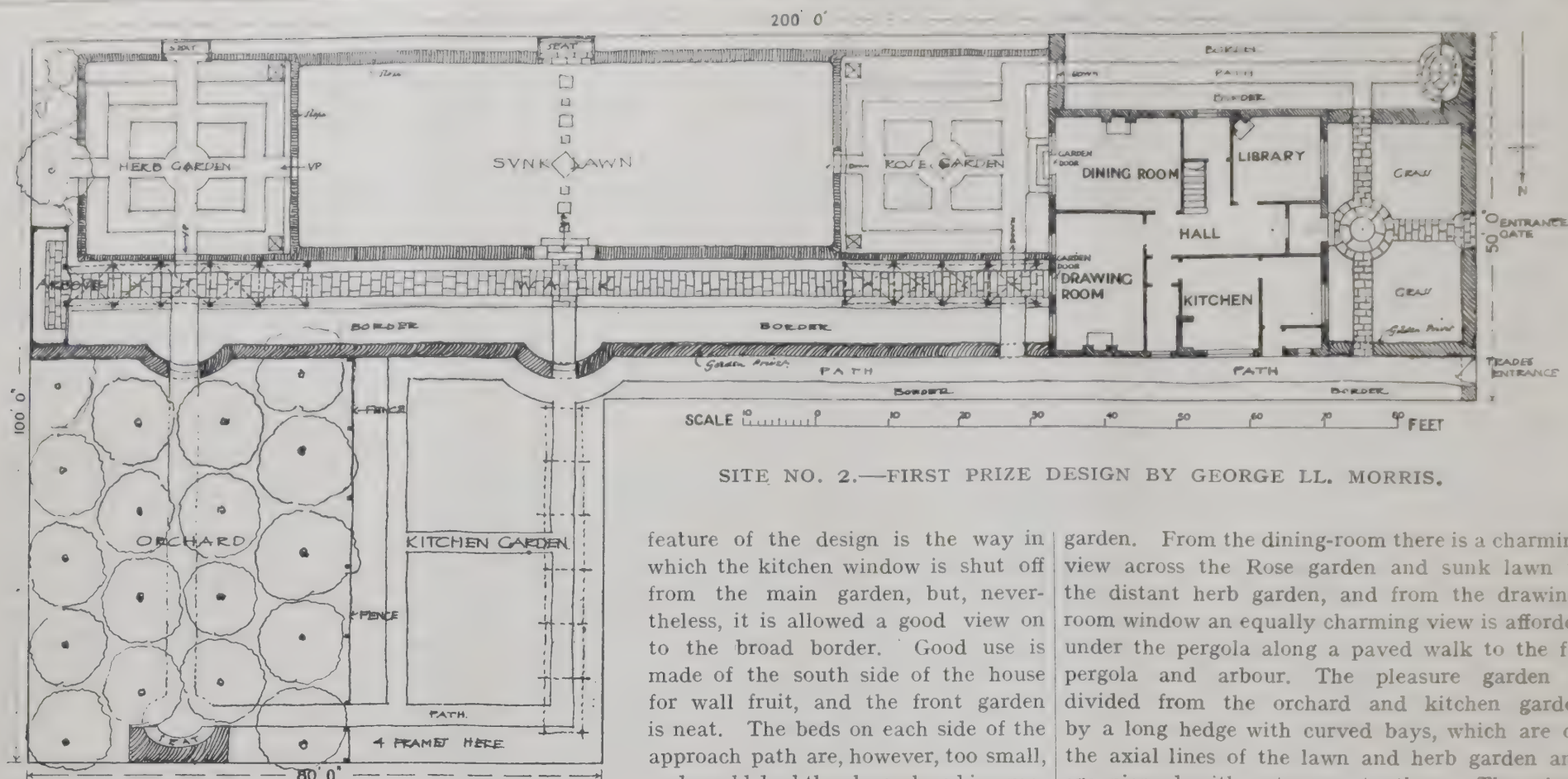
NOTES ON THE WINNING DESIGNS.

Before examining the prize-winning designs in detail, it is worth while drawing attention to some interesting points about the winners. Thirty-two prizes in all were offered, and these have been won by seventeen competitors. The most successful competitor of all is a lady, Miss Grant Brown, who took one first prize, one second prize, and two book prizes. Three competitors—Miss Norah Geddes, Mr. Hugh Dixon and Mr. Kenneth Dalgliesh—each won three prizes. Miss Geddes is the daughter of Professor Patrick Geddes, whose illuminated enthusiasm has done so much for the art of town planning, with which garden design is closely allied in principle. Six competitors took prizes for two sites each, and seven took a single prize. These figures go to show to how great an extent quality in design tells, however much the problem may vary. Twenty-two prizes went to English readers and six to Scottish. Ireland and Wales scored nothing. It is interesting to note that two of the prize-winners hail from the United States and from Canada respectively.

Although the competitors were not asked to give their occupations, there is evidence that several architects entered, and among them Mr. Troyte Griffith succeeded in obtaining the first prize for Site No. 1, the small scale of which made it in some respects the most difficult problem, and the third prize for Site No. 4, which was the most ambitious in scope. Mr. G. L. Morris was another architect to win a first prize (for Site No. 2).



SITE NO. 1.—FIRST PRIZE DESIGN BY A. TROYTE GRIFFITH.



SITE NO. 2.—FIRST PRIZE DESIGN BY GEORGE LL. MORRIS.

feature of the design is the way in which the kitchen window is shut off from the main garden, but, nevertheless, it is allowed a good view on to the broad border. Good use is made of the south side of the house for wall fruit, and the front garden is neat. The beds on each side of the approach path are, however, too small, and would doubtless be replaced in practice by borders about three feet wide.

In the first prize design for Site No. 2, Mr. George Ll. Morris has shown the clearest possible appreciation of the relation between the various parts of the house and the garden. The entrance forecourt is extremely simple, and relies upon plain paving and hedges. From the south side of it there is a little opening to a narrow private garden, with flower borders on either side of a path which leads to the main Rose garden. The trades entrance gives admission to a long path leading eastwards past the kitchen door to the vegetable

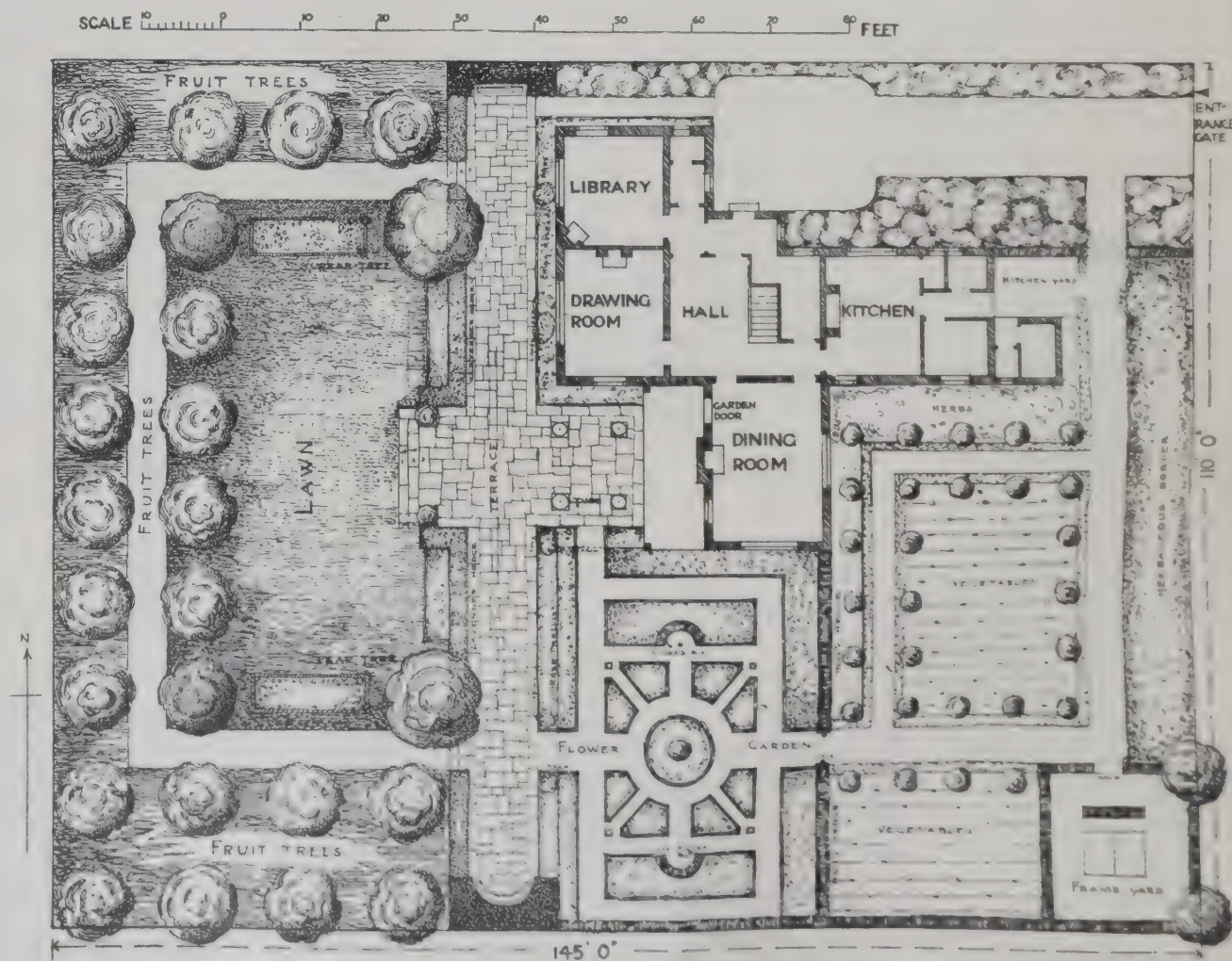
garden. From the dining-room there is a charming view across the Rose garden and sunk lawn to the distant herb garden, and from the drawing-room window an equally charming view is afforded under the pergola along a paved walk to the far pergola and arbour. The pleasure garden is divided from the orchard and kitchen garden by a long hedge with curved bays, which are on the axial lines of the lawn and herb garden and are pierced with entrances to them. The whole scheme is so contrived that there will be interesting views from all the important parts of the garden. The only criticism which need be made is the provision of stepping-stones across the sunk lawn. These are unnecessary, and would make an undesirable break in the pleasant surface of the turf. The use of Golden Privet for all hedges would tend to monotony.

Miss I. Grant Brown's design for Site No. 3 is also admirably contrived. The vegetable garden is placed in direct reference to the kitchen premises, and is divided from the pleasure garden by a

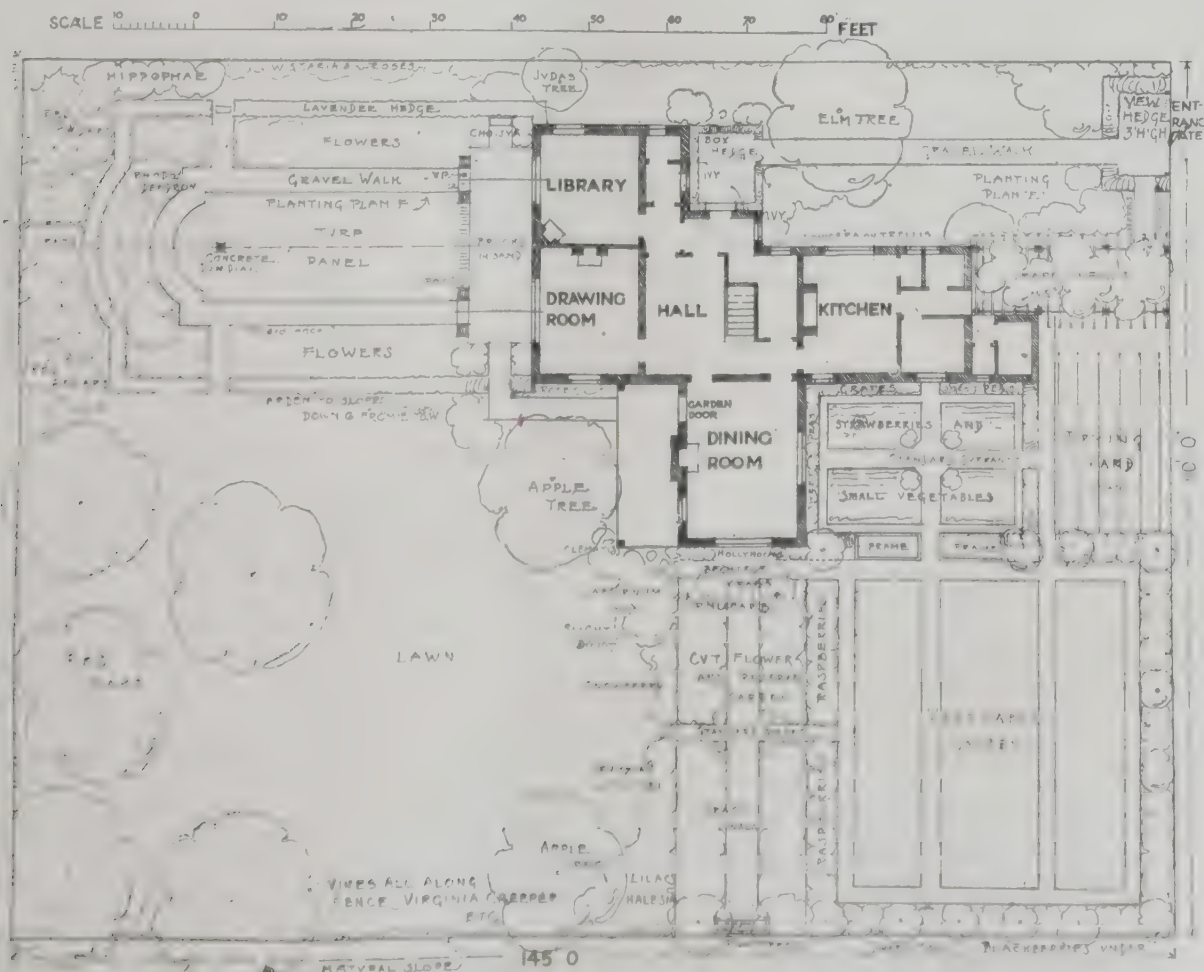
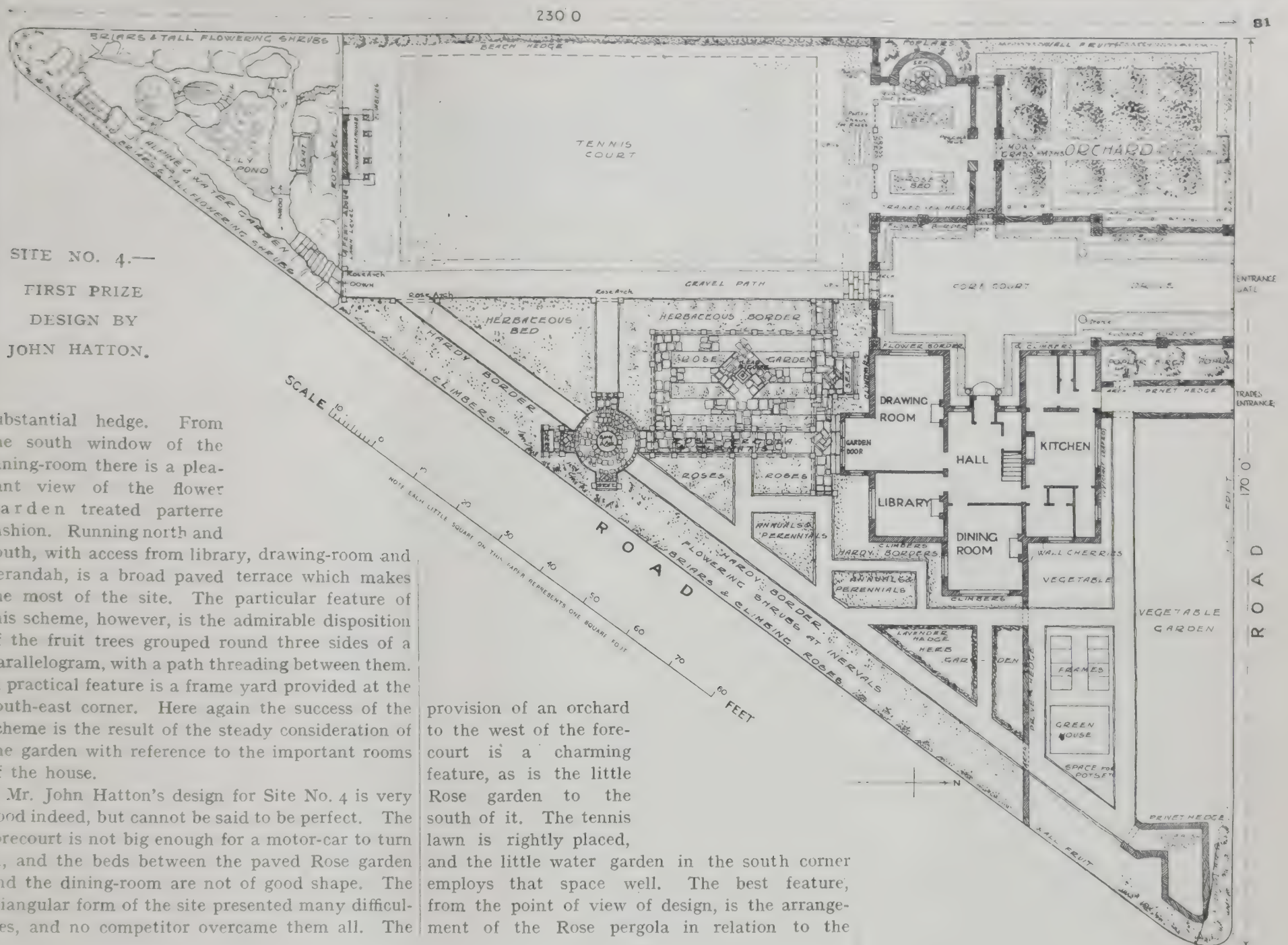
For the guidance of unsuccessful competitors, it is fair to say that their failure to secure prizes was due in the main to two defects of design—disregard of the relation between house and garden, and a lack of shapeliness in the various parts of the garden scheme. Some of them indulged in curling paths which meander aimlessly about the site and create shapeless and useless areas of grass or flower-bed. Others lacked a sense of scale, and provided long borders 2 feet or 3 feet wide or Rose plots no more than 2 feet square. Others placed what should be the more private areas of the gardens, where the owners would wish to sit, in full view of the road. Some neglected aspects altogether, and others paid no attention to the specified slope of ground. A few disregarded limits of cost, and showed features which would be appropriate only in a rich man's garden. It is proper to add here that the Judges did not allow themselves to be affected in the survey of the designs by the skill in draughtsmanship which some competitors showed, but made their awards with sole reference to the artistic and practical merits of the gardens themselves. Nevertheless, they were glad to note that the drawings were unexpectedly clear in their representation of the designers' ideas.

A few of the drawings were accompanied by very charming perspective sketches, and Mr. Kenneth Dalgliesh in particular is to be congratulated on the series he submitted, one of which is now reproduced.

I now pass to the first prize designs. Mr. Troyte Griffith's scheme for Site No. 1 achieved its place by reason of its simplicity and shapeliness. Perhaps the best feature of it is the splayed arrangement of hedges on either side of the drawing-room garden door. From this door there is a view straight across a simple grass plot to the semi-circular Yew hedge, with a good flower border on the north side backed by shrubs, and on the south side a border of Roses mingled with annuals. Two Apple trees make a pleasant background to the bottom hedge, and space is left alongside for a little plot for herbs or a frame. The cleverest



SITE NO. 3.—FIRST PRIZE DESIGN BY MISS I. GRANT BROWN.



garden door of the drawing-room, and there will be good vistas from the forecourt and also along the path running north-east and south-west. The vegetable garden and the rubbish shoot are well disposed in relation to the kitchen, and divided by a hedge from the pleasure garden.

We also illustrate the second prize design submitted by Miss Leonard (of Cambridge, Massachusetts) for Site No. 3. This is well and practically conceived, like all the plans which Miss Leonard submitted, and the Judges would have been able to give a higher award but for the unfortunate position accorded to the practical feature of a drying yard. In her design this is placed adjoining a road, and without anything to screen it from the public. Had it been cut off by a substantial trellis, there would have been no objection to this position, as a Grape Vine trellis and pergola screen it quite satisfactorily from the main entrance. It may well be that in the United States there is less squeamishness about the display of drying linen, but it would not be popular in this country. The vegetable garden and the flower garden are both practically conceived, and the lawn, dotted with Apple trees and red Oaks, would be a very friendly place to sit. This design shows a good compromise between the modern demand for rigid formality and the more haphazard disposition of features which makes the charm of so many old gardens.

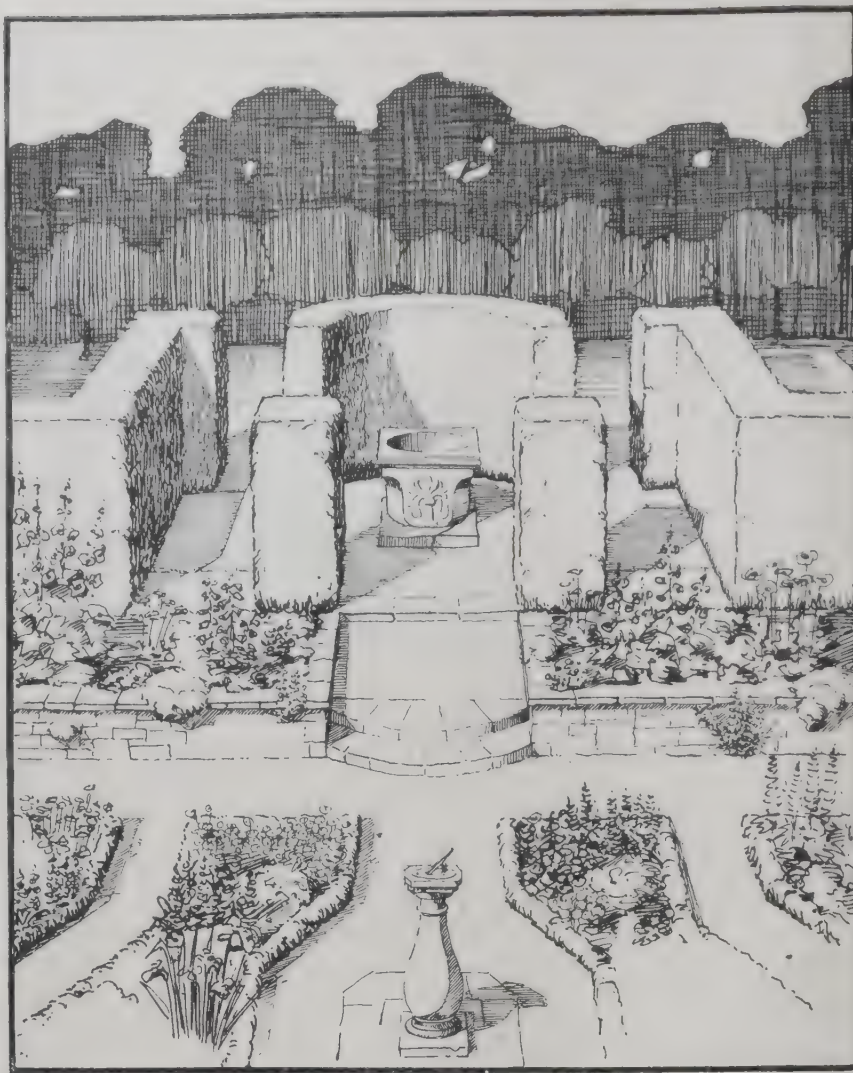
LAWRENCE WEAVER.

THE LESSONS OF THE COMPETITION.

The problems set by the competition were by no means easy. They were, in effect, to compress within severely restricted areas an epitome of the art, principles and practice of garden creation. The plots selected for treatment were barren of anything that could assist in directing the mind toward any particular development, and it is with great pleasure that the Judges testify to the ingenuity and inventiveness displayed by many of the competitors in creating, out of such slight material, so much diversity of design and potentially picturesque effects. It is inevitable, after spending much time in consideration of the large number of plans submitted, and employing a process of elimination of the worst in order to choose the best, that the tendency of the Judges' comments is to become critical as regards all. We therefore devote our remarks chiefly to the lessons to be learnt from those points in which the various schemes fail, rather than from those in which they succeed.

One fact emerges from a consideration of such a number and variety of ideas as to what constitutes the best method of arranging a small garden, namely, that there were two classes of competitors who approached the matter from quite different standpoints. One class concentrated their efforts on an arrangement of paths, fences and a division of the area into spaces, each allotted for a specific purpose. Generally speaking, they failed to realise fully the fact that a garden is essentially a place wherein to grow things, and grow them in such a way that they shall fulfil Miss Jekyll's ideal, to "form beautiful pictures in our gardens." The danger in thus approaching the creation of a garden is that it attaches an infinite importance to the frame and ignores the picture. The tendency is to produce a garden which is a mere pattern, all design and no life, a stonemason's tombstone rather than a Pygmalion's Galatea.

The other class looked on the problem from the opposite standpoint, namely, that, given certain provision for growth and adequate planting schemes, little else mattered. These did not sufficiently realise that they had produced but a poor setting for their effects. In the result, whereas many plants may be well grown, they will never be seen to the best advantage, and in a small garden, in particular, a general sense of untidiness will always be in evidence.



PERSPECTIVE VIEW BY K. DALGLIESH.

The duty of the Judges, therefore, resolved itself largely into selecting those designs that most nearly attained to the ideal when judged from the standpoints the competitors had themselves taken. It will be seen from the published results that the balance was rather in favour of the first class. Due attention was, however, paid to the second, so that adequate provision was made in the selected plans for successful cultivation. It was felt that the making of the garden is in some respects more important than the planting, especially as the means of the owner were assumed to be limited. Obviously, if mistakes are made anywhere, a garden can be replanted with much greater ease and less expense than it can be remade. Judged on points, the planting schemes were inferior all round to the work produced in designing. This is regrettable but not surprising. It is far more difficult to produce satisfactory planting plans than a design based on certain principles, which, once grasped, reduce the task to an arrangement of lines and curves,

the effects of which are tested in the development of the plan on paper.

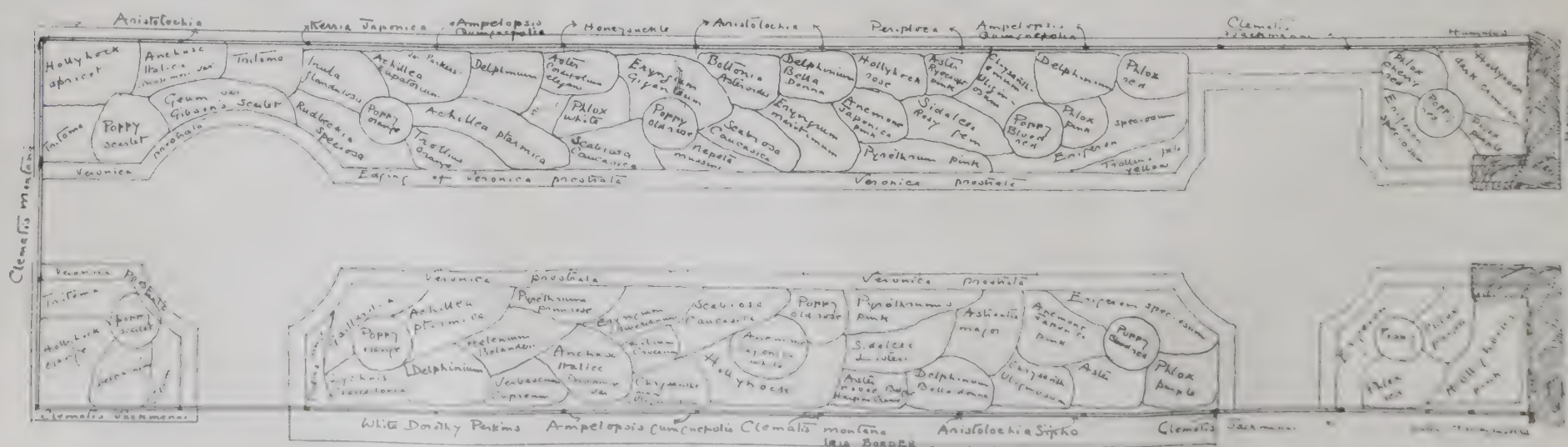
Consider for a moment the really excellent design produced by Mr. G. Ll. Morris for Site No. 2. It is easy to imagine some delightful effects in a garden arranged on these lines, but it would have been interesting to know exactly what he suggests should be planted in a herb garden to which as much space is devoted and into which as much design is introduced as for the Rose garden in the same plan. His vision of this little garden, with its seat placed to command a view down through the orchard, where flowering bulbs such as Crocuses, Tulips, Daffodils, Snowdrops, Scillas, &c., would doubtlessly be allowed to brighten the earth in spring, was really that of a garden of sweet-scented flowers and herbs, with Violets, Mignonette, Lavender, Lemon Verbena, Night-scented Stock and Tobacco Plant, each in their season creating an atmosphere redolent with garden perfumes. And then, Miss Leonard's borders seen from the drawing-room and library. If she had prepared her planting plans for these, they would have been masses of cool grey foliage with lavender, pale blue, the palest of yellow, cream and pink flowers, with perhaps a little dark purple used as a foil. They would have been planted principally with hardy perennial plants, with spaces left for spring bulbs, to be succeeded by annuals. An example of what plants Miss

Leonard would have used for this purpose would have been full of interest, especially as she would be considering the matter from the American point of view.

One planting plan by Miss I. Grant Brown (reproduced below) is in many ways excellent. She shows a full appreciation of the fact that it is better to group plants in relation to each other than to use them in serried lines or rigid blocks. Her colour arrangement is generally well thought out. Undoubtedly in the actual planting of these borders some provision would be made for prolonging the flowering period by introducing a few spring flowering bulbs and summer and autumn flowering annuals. The edging of *Veronica prostrata* is very neat when not in flower and brilliant when the flowering period arrives; an added interest would, however, follow a little more varied edging. There are innumerable dwarf plants that can be used for this purpose that have a longer flowering period.

GEORGE DILLISTONE.

F. W. HARVEY.



A PLANTING PLAN BY MISS I. GRANT BROWN.

PLANTING UNDER LARGE TREES.

IN the more prominent parts of the woodland, where the trees are surrounded with turf, it frequently happens that grass refuses to grow directly under the largest and most dense specimens. The result is bare, ugly patches that many experience some difficulty in clothing properly so that they harmonise with the turf. During recent years considerable attention has been given to the planting of these bare spaces with various kinds of low-growing shrubs. Some discretion is, however, needed in selecting shrubs for this purpose, because the majority of those which we would like to use refuse to grow in the dense shade which prevails during the summer months and the almost incessant drip from the branches of the overhanging trees during the winter.

Before any kind is planted it will be necessary to have the ground well prepared, and this is best done early in the autumn by digging it up thoroughly so that rain can soak in instead of running off the surface. In many instances the roots of the trees will be found quite close to the surface, but there need be no scruples about breaking a few of the smaller ones, as a healthy tree will always have an abundance of vigorous roots. Where there is very little loose soil present, and this obviously of a poor character, ten or more cartloads of good soil should be placed over the roots of each tree, so as to give the shrubs a start. When well established, the kinds mentioned later will thrive in almost any kind of soil and in dense shade. It is, however, most essential that well-rooted, sturdy plants be selected; weak specimens will most likely succumb the first summer. Should dry weather be experienced during the first year after planting, it will be necessary to give the shrubs good soakings of water at frequent intervals. So much depends on giving them a good start; a little special attention at the outset will be fully repaid in subsequent years.

Where a dwarf carpet of greenery is desired, there is nothing better than the common Ivy, and if plants are set out 18 inches to 2 feet apart and kept free from weeds the first year, a dense surface will soon be formed. Almost, if not quite, as good is the Periwinkle, a trailing semi-shrub of evergreen character. Another dwarf plant, of similar habit to the Periwinkle, is *Euonymus radicans*, which has dark green foliage, and where something extra choice is required, the variegated form of this may be used. All the foregoing may be kept dwarf, close and fresh-looking by annual clipping, this cutting to be done in March, just before new growth commences. If desired, odd bulbs of such strong-growing Daffodils as Emperor and Empress might be planted between the shrubs. They would give flowers for a few years until the shrubs became too dense. Another method of carpeting the ground under trees is shown in the accompanying illustration. Although it could not be carried out

where the trunks of the trees are large, it is very effective with trees of moderate dimensions. The Grape Hyacinths or *Muscaris* are charming little bulbous plants that produce their blue flowers in abundance in early spring, and if planted rather thickly beneath a tree, as shown, their grass-like foliage will make a green carpet for many weeks after the blossoms have faded. To get the best results the bulbs should be planted during the autumn, and then left alone for several years.

For taller undergrowth the common *Rhododendron ponticum* may be used in soil which does not contain an excess of lime; where decayed leaves are prevalent this *Rhododendron* is almost certain to thrive. A dwarf shrub that delights in similar soil is *Gaultheria Shallon*, and where desired this may be utilised for forming a broad edging to bold masses of *Rhododendron*. For very poor soils *Berberis Aquifolium*, *Aucuba*



GRAPE HYACINTHS OR MUSCARIS AS A CARPET. BULBS MAY BE PLANTED NOW.

japonica and the Oval-leaved Privet (*Ligustrum ovalifolium*) are all suitable. The *Berberis* can be kept to about eighteen inches in height by annual pruning, but the *Aucuba* and Privet will do better if allowed to grow 3 feet to 4 feet high. The common Butcher's Broom (*Ruscus aculeatus*) is a dwarf shrub, some two feet high, that will thrive under trees in most soils and localities. For carpeting the ground between trees that stand some distance apart, the St. John's Wort (*Hypericum calycinum*) is an ornamental and neat plant, and it has the merit of thriving in almost any kind of soil provided it is well drained. Any of the plants mentioned, when properly established, will look far neater and better than the worn, mossy scraps of turf that are too often found doing duty beneath trees. Good examples of undergrowth planting can always be seen at Kew, where considerable attention has been given to the subject.

L. L. M

THE AUTUMN TREATMENT OF LAND.

IN our issue for September 26 last we endeavoured to point out some of the fallacies that evidently exist about cultivating and cropping waste land. We also referred to an excellent leaflet (Special Leaflet No. 1) dealing with the subject that had recently been published by the Board of Agriculture. This is the most sensible advice that we have seen given during the present war, and through the courtesy of the Board we are able to publish it herewith. Of course, the advice relating to the sowing of crops in August is now too late for this year, but the tenor of the advice would be broken if this portion were omitted:

"The following suggestions and recommendations

have been prepared for the benefit of those who occupy small areas of land, such as allotments and gardens, or who wish to bring fresh land under spade cultivation with the view of increasing their supplies of vegetables during the coming autumn and winter and thereafter. It should, of course, be borne in mind that the suggestions made are dependent upon local conditions.

Land which is available for spade cultivation in small areas may be divided into three classes, viz.:

- (a) Land at present under spade or arable cultivation.
- (b) Good land which has been under permanent grass.
- (c) Derelict or waste land

CLASS A.—CULTIVATED LAND.

Assuming that land of this character has been well dug over and is in good heart, very little additional cultivation will be required in the autumn. The ground should, however, be dug

one spit deep, and a dressing of stable manure should be incorporated if the ground was not manured in spring.

For Sowing in August.—On such land the following crops might be sown immediately :

1. Early Turnips .. White and Purple Milan.
2. Carrots Early Horn.
3. Onions White Lisbon.
4. Lettuce Winter varieties.
5. Radish French Breakfast.
6. Spinach Winter or Prickly.

Seed should be sown at the following rates :

1. Turnips.—Sow 1oz. to 200 feet of drill half an inch deep. The drills should be 12 inches apart. Thin out to 5 inches to 9 inches apart according to variety.

2. Carrots.—Sow 1oz. to 300 feet of drill three-quarters of an inch to 1 inch in depth. The drills should be 12 inches apart. Thin out gradually to 5 inches, 6 inches or 8 inches apart according to season and variety.

3. Onions.—Sow 1oz. to 200 feet of drill (10lb. per acre) 1 inch deep. There should be 9 inches to 12 inches between the drills. Autumn-sown varieties need not be thinned.

4. Lettuce.—Sow half an ounce to 160 feet of drill a quarter of an inch deep, in rows 9 to 12 inches apart. Thin out or plant out, leaving 6 inches to 8 inches between the plants according to variety.

5. Radish.—Sow 1oz. of seed to 75 feet of drill 1 inch in depth, in rows 6 inches to 9 inches apart.

6. Spinach.—Sow 1oz. of seed to 65 feet of drill about one inch deep, in rows 12 inches to 15 inches apart.

For Planting Before Mid-September.—The following vegetables might be planted in August or early September :

1. Early Cabbage .. Any early variety.
2. Broccoli Winter and spring varieties.
3. Borecole or Kale.. Winter and spring varieties.
4. Leeks Musselburgh

They should be planted in the following way, viz. :

1. Early Cabbage.—Plant in rows, leaving 15 inches between the plants and 18 inches between the rows. Very dwarf varieties, however, succeed if only 12 inches is left between the plants and 15 inches between the rows. Strong-growing late varieties require 18 inches between the plants and 27 inches between the rows. The plants must be earthed up with a plough or hoe as the crop grows.

2. Broccoli.—Plant in rows, leaving 18 inches between the plants and 27 inches between the rows. The crop should be earthed up as in the case of Cabbage.

3. Borecole or Kale.—Plant in rows the same as Broccoli.

4. Leeks.—Plant in rows, leaving 4 inches to 6 inches between the plants and 1 foot to 15 inches between the rows.

For Sowing or Planting in October and Early November.—The following vegetables might be

sown or planted in October or the beginning of November :

1. Broad Beans.
2. Early Peas.
3. All varieties of Cabbage and Kale raised from seed sown in July or August. (Note.—If Cabbage and Kale plants are required for distribution on a large scale in October, seed should be sown in August at the rate of about twenty-five pounds per acre ; seed-beds of one acre should furnish about five hundred thousand plants.)

These plants will yield crops in the following spring and early summer, but too late to allow of Potatoes being successfully planted after them. They could, however, be succeeded by Onions,



FLOWERS OF THE NEW CREAMY WHITE COLLARETTE DAHLIA CANOPUS (MUCH REDUCED).

Broccoli, Brussels Sprouts, Kale or Carrots. Growers should remember that it is inadvisable that one crop of the Cabbage family should be succeeded by another of the same kind. Beans and Peas should be followed by Cabbage, and Cabbage by Onions, Carrots, or some kind of crop other than the Cabbage tribe.

(To be continued.)

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Laelio-Cattleya Mrs. Evelyn Norrie.—A very handsome bigeneric hybrid, in which the sepals and petals are clear chrome yellow, the crimson lip, heavily veined with white, having the frontal

lobe of deep crimson. A very beautiful and striking novelty.

Cattleya Princess Royal (C. Fabia × C. hardyana).—In this beautiful form the sepals and petals are rosy purple, the broad frontal lobe of rich crimson, stained and suffused with orange in the throat.

Cattleya Rhoda Fowler's Variety.—A form of much beauty and excellence. The sepals and petals are of rose cerise colouring, the lip of rich dark purple.

AWARDS OF MERIT.

Cattleya Antiope Brackenhurst Variety (C. chamberlainiana × C. aurea).—Sepals and petals light golden yellow, the moderately large, heavily

fringed lip having a broad frontal lobe of brownish velvet hue, the tube heavily lined internally. The foregoing four varieties named were exhibited by J. Gurney Fowler, Esq., Brackenhurst, Pembury, Kent.

Laelio-Cattleya Britannia Melanie.—In this distinct and handsome variety the pure white sepals and petals are of exceptional size and length, and ovate-acuminate in outline. The frontal lobe of the lip is of rich purplish crimson, in striking contrast to the wire-edged margin of purest white. From Messrs. Charlesworth and Co., Hayward's Heath.

Carnation Princess Dagmar.—A very handsome perpetual-flowering variety, having the rich velvety crimson colouring and fragrance of the Old Clove wedded to a flower of goodly proportions and fine build. The variety has the deeply serrated petals of many of the American class, the flowers well supported on stiff stems. It will doubtless receive a warm welcome for its fragrance alone. Shown by Messrs. Allwood Brothers, Hayward's Heath, and Stuart Low and Co., Bush Hill Park, Enfield.

Dahlia Canopus (Collarette).—The largest white-flowered variety of its class to-day and a variety of merit. The colour is creamy, not the chaste pure white of Eden, recently certificated. From Messrs. Stredwick and Son, St. Leonards.

Aster Purple Prince.—This is one of the Novæ Angliæ set and a seedling from Mrs. Bowman, upon which it is a great improvement, both in size and colour. The latter is of reddish purple hue, in fine contrast to the orange disc characteristic of many of its set. Shown by the Hon. Vicary Gibbs, Elstree.

Aster Cloudy Blue.—A good addition to the semi-double varieties, which have become so popular of late. The variety has a fine pyramidal habit of growth, freely set with flowers of pale lavender blue colouring of considerable size. It is said to attain to 3½ feet high. From Mr. Ernest Ballard, Old Court, Colwall, near Malvern.

All the foregoing were shown before the Royal Horticultural Society on the 6th inst., when the awards were made.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Strawberry Plants for early forcing should be fully exposed to light and air in order to ripen the crowns before the time arrives for placing them in their winter quarters. No hard-and-fast rule can be laid down with regard to time in this matter, as so much depends on the weather; but while open weather lasts, the best place for them is undoubtedly where they are. Keep the pots quite free from weeds and attend regularly to watering. Pots which are well filled with roots should be watered twice weekly with liquid manure from the farm-yard. When the time arrives for plunging the pots, there is nothing better than a bed of sifted ashes, which should be of sufficient depth to allow a bed 3 inches deep under the pots, as a protection from worms. If cold frames are available, the first batch of plants may be placed under cover in November, so that the soil may not become saturated with cold rain.

Tomatoes.—Plants from which supplies are being gathered will require very careful attention with regard to watering and airing. The house should not be quite closed while mild weather lasts, and during the day the ventilators should be fully open. Manure must be very sparingly applied to plants at this stage, but clear water must be freely given to the roots when necessary. Keep the plants within bounds by frequently stopping and thinning the shoots, so that no great quantity of growth is removed at one time.

Young Tomato Plants for early spring supplies ought now to be ready for potting into 3-inch pots. They should be placed quite close to the roof glass in a temperature of 55°. Water sparingly, and allow sufficient air to keep the plants from becoming drawn. The soil should consist of two-thirds turfy loam and the remainder of leaf-soil, with a good sprinkling of fine lime rubble.

Plants Under Glass.

Lily of the Valley.—A supply of this favourite flower may easily be kept up during the winter; and where sufficient fire-heat is available, the flowers may be produced in a very short time. When the crowns have been potted up, a covering of damp moss may be placed over them and kept moist by the frequent use of the syringe. Keep the soil moist and protect from strong light. Fresh batches of crowns should be placed in heat at intervals of ten days.

Cinerarias.—These should now be removed from their summer quarters and placed in pits with a south aspect. The plants will grow much better on a bed of ashes than on wooden stages. Keep a look-out for aphides, and fumigate the pit as soon as they appear. When the pots are well filled with roots, manure water ought to be frequently given.

Zonal Pelargoniums.—Plants for winter blooming should now be removed from cold pits to some well-ventilated structure where they can be placed within 2 feet of the glass, and where a little fire-heat can be applied during dull weather to keep the atmosphere of the house dry. The plants will benefit by frequent light dressings of some approved artificial manure.

The Hardy Fruit Garden.

Young Strawberry Plantations, made a month or two ago, will require careful attention with regard to water. Each plant must be examined and sufficient water given to keep the ball of soil in a moist condition; for if once allowed to become dry at this period, the result will never be satisfactory. The Dutch hoe should be frequently used among these young plants to keep small weeds in check.

Late-Fruiting Strawberries.—St. Antoine de Padoue is the best autumn-fruiting variety, and now is the time to propagate young stock for next season's crop. The runners should be removed from the old plants and inserted in small pots of rich soil. If placed in a close cold frame they will soon make roots, and the plants will benefit by the protection of the frame during the winter.

They will then make good plants for new plantations in March. A well-prepared north border should be selected for them, and, as the plants do not grow large, 18 inches between the rows will be sufficient, while a space of 1 foot will be necessary between the plants in the row.

The Flower Garden.

Herbaceous Borders.—The present is a good time for lifting, dividing and replanting the various subjects in the herbaceous borders; but before the plants are disturbed they should be carefully labelled. They may then be lifted and placed temporarily in a border near at hand while the ground is being trenched and prepared for them; and as this work proceeds, a good quantity of decayed manure should be incorporated with the soil. Wood ashes and old lime rubble may be freely mixed with heavy soil, while river sand may also be applied with advantage. When the ground is sufficiently settled, planting may be commenced; but previous to this the border should be marked out and the position of the most important subjects indicated, to avoid confusion. The height of the various plants, the colour of the flowers and the season of blooming must all be taken into consideration. When dividing the roots the best method is to pull them apart, and not cut them with a spade or knife. The pieces should be planted firmly, and the surface of the ground regulated as the work proceeds.

The Kitchen Garden.

Turnips.—The recent dry weather has been unfavourable to this crop, and sowings made for spring supplies should receive a good soaking of clear water, after which a sprinkling of artificial manure may be applied and lightly washed into the soil. These Turnips may be allowed to remain in the ground throughout the winter.

Celery.—The earthing-up of this crop should be accomplished as quickly as possible. Water the beds thoroughly a day or two before the soil is placed in position, remove all side growths, and tie up the foliage so that it may not be injured by coming in contact with the soil.

Lettuce.—A sowing should be made in a cold pit to produce plants to stand the winter under glass and for planting in the open garden in March with a view to cutting in May. Maximum is one of the best for this purpose.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Asparagus.—As soon as the tops change colour, the plants should be cut over, and the cuttings, as well as all weeds and rubbish, be carefully raked off. When the beds have been made tidy, a small mulch of some well-rotted manure may be given to protect the crowns during severe weather.

Tomatoes.—All the fruits from plants growing outside should now be cut and strung up to the wires in a vinery or Peach-house. These will all ripen in time, and if some are not quite fit for salads, they will at least come in handy for soups.

Rhubarb.—As soon as the growths of one or other of the early varieties have died down, a start should be made for securing a few roots for early forcing. Dig up one or two roots, according to requirements, and leave these on the surface exposed to the weather for a time; a few degrees of frost will give them the necessary check to render them fit for forcing. Continue to throw out a few roots at intervals to keep up a succession.

The Flower Garden.

Wallflower and Myosotis.—The planting of these spring-flowering subjects, if not already attended to, should be proceeded with at once. It must be remembered that the better the plants are established now, the better they will withstand

severe weather during winter. If by any chance the soil is dry, they should be given a good watering to settle the soil about the roots.

Hollyhocks.—In many districts it is quite safe to let these plants remain outside during the winter. Even here we never disturb them, and scarcely ever lose a plant. But as the soil and situation, more than frost, play a great part in this, it would not be advisable in all cases to follow this practice. When the soil is inclined to be of a retentive nature, it will be safer to lift them and winter them in cold frames. When the flower-spikes have faded, they will be quite ready to be moved. If, however, there is the least trace of freshness in the weather, this work had better be deferred for a time.

Top-Dressing Tennis and Croquet Lawns.—Now that the season is at an end so far as these outside games are concerned, the weeding and repairing of the turf ought to be attended to. In the case of weeds, the lawn should be gone over systematically, and Daisies, Plantains and other coarse weeds carefully taken up. In the case of hand weeding, mark off the lawn into sections of 3 feet or 4 feet, as, by so doing, no part of the lawn will be omitted. When this work is finished, top-dress the surface with a mixture of sifted soil or sand, adding a little approved lawn manure. This can be evenly distributed with a broom or the back of a rake. Where any turfing has to be done, the sooner this work is completed the better chance will it have to become knitted together before the close of the growing season.

Plants Under Glass.

Pot Roses.—Those intended for indoor culture should be looked over, and where repotting is necessary, this should be attended to at once. Have the pots thoroughly washed outside and in, and see that ample drainage is provided. A suitable compost would be loam inclined to be of a heavy nature, lime rubble and a sprinkling of bone-meal. Plants that do not require to be repotted must have the drainage examined and be top-dressed with the compost, as advised for potting. Plunge the pots up to their rims in ashes behind a wall, when they can be taken indoors as required.

Pelargoniums.—Those intended for winter flowering must now be placed in a greenhouse, and all flowers should be allowed to develop. Water must be given sparingly, and although air should be admitted freely on all favourable occasions, the atmosphere must be kept dry. A number of the older plants that have been flowering during the summer should be retained. They must, of course, be cut back, placed on a shelf and given little or no water. These will make good specimen plants for next season.

Retarded Lily of the Valley.—These crowns can now be obtained for forcing, and may be had in flower roughly from three to four weeks from the time they are potted. Unfortunately, although their culture is so simple, they are not always seen at their best. Many people rush them into heat the moment they are received. Now this is a great mistake. Place twelve to fifteen crowns in a 6-inch pot, leaving them well above the surface, and stand them in a cold frame for at least four or five days, covering the glass with a garden mat, by which time they will have grown 2 inches. They may then be transferred to the forcing-pit, and on no account allow the soil to become dry. Always water with tepid water.

The Hardy Fruit Garden.

Gooseberries.—Where a new plantation of these is intended, no time should be lost in preparing the ground, and as these bushes will, in the ordinary course of things, remain on the same ground for many years, the trenching of the ground must be done thoroughly. It is a great mistake to retain old, worn-out bushes, which are in most cases simply a harbour for insects, and at best only produce a moderate crop of under-sized berries; whereas these young bushes can be fruited the second year. Indeed, many of them will fruit the following summer.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

ANSWERS TO CORRESPONDENTS.

TREES AND SHRUBS.

SMALL EVERGREEN TREE (G. A.).—It is possible that *Picea pungens glauca* will suit your purpose, although if a conifer other than a Fir or Spruce would do, you might try *Cupressus lawsoniana erecta viridis*. The former is a very beautiful tree, but has not such a good constitution as the latter. A hole 5 feet or 6 feet in diameter should be made and filled with good soil containing leaf-mould. October would be a better time for planting than November.

HOLLIES TURNING BROWN (K. M. S.).—It is not possible to say why your Hollies are turning brown without inspecting the plants, but as you say there has been a fire near by, it is possible that the flames have scorched the leaves. If the wet ground you mention is the cause of the trouble, you will find decayed roots. By digging a hole near the bushes you can easily discover whether there is any root trouble. The only way to get rid of water-rats is to shoot, trap, or infect them with Danyz Virus.

USE OF PEAT MOSS LITTER FOR RHODODENDRONS (L. A.).—Peat moss litter may be used as a surface-dressing for Rhododendrons, providing it is well decayed and is not used too lavishly. It is really a more satisfactory manure used as a surface-dressing than for digging in, although some people have found it satisfactory when used as an ordinary manure. A good deal of correspondence took place last spring in our pages as to the use of peat moss litter as a manure. It is now too late to prune Rhododendrons. Such severe pruning as you suggest should be accomplished in April, for then there is the full growing season to be looked forward to. If the plants were cut back at the present time, they would look ugly throughout the winter and spring, and the old branches would be less liable to produce new shoots than if the pruning were left until April.

FRUIT GARDEN.

BOTTLING PEARS (A. B. W.).—Unquestionably your failure is due chiefly to the fruit being too ripe. There is no reason why you should not be equally as successful with these as with the Plums. The bottling should take place as soon as the fruits have reached their full size and just before they commence to ripen. Sugar may be added at the time of bottling according to taste, and will often bring out the flavour of the Pears better than if done in pure water only. Some place two Cloves in each bottle and a little Lemon peel. All of the varieties named are suitable, but for preference select *Beurré Clairgeau*.

MISCELLANEOUS.

GRUBS ON PELARGONIUMS (E. S. H. S.).—We think your best plan will be to spray the Pelargoniums with lead arsenate next year if the grubs appear. You do not send any, but from what you say we suspect your plants are attacked by the larvæ of the silver Y moth.

HOUSE DRAINAGE (H. H., Cheshire).—If the tank is the receptacle of nothing stronger than sink or bath water, or these with rain-water, the Rose-beds may be freely watered through the growing season once or twice weekly with advantage. If cesspool matter is mingled with these, the liquid might be given once a fortnight during the same period, and once a month at other times. The question is one which can hardly be satisfactorily answered with the information before us.

EFFECT OF TARRED ROAD ON PLANTS (Dun Spiro, Spero).—We can hardly think the tar of the road would have the evil effects you speak of, and especially so far removed as some of the plants are from the tarred area. It is very difficult to say exactly what may have been the causes without seeing the plants, but all the symptoms that you speak of may very well have been produced through lack of water at a critical time, and we are inclined to think the extraordinary weather we have experienced this season is to blame.

POT-POURRI: THE DRY PROCESS (E. J.).—Pink Roses, when they are thoroughly dry, should have the petals pulled apart, laying them thinly on sheets of paper in an airy room till they are quite dry. Sweet Geranium leaves and Lavender are also dried, the larger kinds of Geranium leaves being pulled to pieces. For a quantity equal to two-thirds of a bushel, have the following spices and gums, all in powder or finely crushed: Cloves, mace, and cinnamon, 2oz. of each; coriander, allspice, gum styrax and gum benzoin, half an ounce each; violet powder, quarter of a pound. Mix all well together. There is a whole chapter on the making of pot-pourri, with a detailed description of the moist process—a process that cannot be described in a few sentences—in Miss Jekyll's book, "Home and Gardens" (Longmans).

NAMES OF PLANTS.—J. J.—The plant you send is the Thorn Apple (*Datura Stramonium*). It is really a weed.—*Mrs. A. Thomson.*—We think the Rose is Lady Hillingdon or possibly Marquise de Sinety; it is impossible to name so dried a specimen with any certainty.—*F. A. Sturge.*—*Crocus nudiflorus.*—*Alfred Allhusen.*—*A. Charleis heterophylla*; *B. Spirea japonica*; *C. Liatris graminifolia.*—*F. Marples.*—1, *Linaria maroccana*; 2, *Teucrium Botrys*, a rare British plant.—*Thomas Bicknell.*—The Pink is a form of *Dianthus Sequieri*, probably a hybrid of it and some other species.

NAMES OF FRUIT.—W. S. Tillett.—Crimson Costard.—*H. B. B.*—1, Charles Ross; 2, New Hawthornden; 3, Blenheim Orange; 4, Cornish Aromatic; 5, Winter Peach; 6, Cox's Orange Pippin; 7, Rosemary Russet; 8, Pickering's Seedling; 9, Sugar Loaf; 10, Reinette Grise; 11, King of the Pippins; 12, Rambour Frone.—*J. M., Barn Green.*—1, Stirling Castle; 2, The Queen; 3, Bismarck; 4, Newton Wonder; 5, Cellini Pippin; 6, Fearn's Pippin; 7, Cox's Pomona; 8, Beurré Dumont; 9, Princess.—*W. Cann.*—American Mother.—*John Gibbins.*—Beurré d'Anjou.—*W. Lumley.*—1, Norfolk Beauty; 2 and 5, Golden Spire; 3, Christmas Pearmain; 4, Lord Grosvenor.

OBITUARY.

JOHN GOULD VEITCH.

It is with regret that we have to announce the death of Mr. John Gould Veitch, of the well-known firm of Messrs. J. Veitch and Sons, which occurred on the 3rd inst. The deceased, who was only forty-five years of age, was the only surviving son of the late John Gould Veitch and a nephew of Sir Harry J. Veitch. He was an M.A. (Cambridge), and also took his Blue, being an expert at football. He took an active part in the Chelsea business, but of late years, owing to failing health, was not able to appear much in public. He leaves a widow and one child, to whom we tender our deepest sympathy in their sad loss. The funeral took place at Putney Vale Cemetery on the 7th inst. amid many tokens of the esteem in which he was held.

SOCIETIES.

BIRMINGHAM AND MIDLAND COUNTIES GARDENERS' ASSOCIATION.

A LECTURE on "The Border Carnation: Its History and Cultivation" was given at the opening of the autumn session on Monday, October 5, by Mr. A. R. Brown of King's Norton. The last meeting's minutes having been read, Mr. Herbert (chairman) called upon the lecturer, stating that Mr. Brown's experience with this plant had made him familiar with much respecting its cultivation, and the advice he was able to give was invaluable to growers. The history of the Carnation, said the lecturer, dates back to 300 B.C., when it was described by Theophrates, the ancient botanist, in whose hands botany attained its highest development. It was he who endowed this plant with its generic name, *Dianthus*, i.e., Divine Flower, and for a long time it was cultivated only in its relation to medicine and cookery. Pliny also informs us that the Romans used it for sops in wine and ale, as it imparted thereto a spicy flavour. To Chaucer, in the reign of Edward III., could be traced the first mention of its cultivation in England, while, later on, in Shakespeare's famous writings it came in twice. During the intervening ages until to-day, the literal meaning of Carnation had slightly altered, like the word *Picotée*, derived from the French *picoté*, meaning spotted—a mere misnomer at the present day—for the chief point in the *Picotée* at present is its purity, spots or bars being grave defects. At one time the split calyxed "burstlers" were alone preserved for cultivation, "whole blowers" not being deemed worthy of any serious attention until 1740, when they ousted the coarser varieties. At this time, too, serrated petals became regarded as a serious blemish, and accordingly were eliminated. More than sixty years ago the present standard of excellence for Carnations was arrived at, and since then it has remained unaltered. Towards the nineteenth century, bizzarres, flakes and white-ground *Picotées* became the valued varieties, selfs then being termed as "wasters"; but in the thirty-five years which have elapsed since the marvellous improvements by several gentlemen revolutionised this flower, the once despised selfs have become the most popular type of this "Divine of Flowers." Mr. Brown next proceeded to give a few cultural notes, detailing the method of his own procedure through all the numerous stages, from the time of propagation to the flowering time of the plant. He also dealt with lists of the best of present-day varieties, gave some useful suggestions for the benefit of intending exhibitors for the future, and ended his discourse with some further remarks on the Carnation in the border. The lecture, which was of a highly interesting nature, full of excellent information, was thoroughly enjoyed by all. The meeting concluded with a well-applauded vote of thanks proposed by Mr. Cryer and seconded by Mr. Higley. Before the close, the secretary (Mr. Deedman) made reference to a box. This had been requisitioned for fortnightly voluntary contributions of the members for the benefit of the Prince of Wales's Fund. A member, Mr. Farmer, had with great generosity provided, as an initial donation, £1, and this, together with the first evening's contributions, now made up a total for the purpose of the Fund of £1 10s. 6d.

ROYAL HORTICULTURAL SOCIETY.

AT quite short notice, and in large degree unexpected, quite a creditable exhibition was brought together on the 6th inst. at the Royal Horticultural Society's Hall, Vincent Square, a considerable number of Fellows visiting the show in the afternoon. An outstanding feature of the meeting was the superb collection of fruits—Apples and Pears—from Eynsford, than which nothing finer has been exhibited. From Weybridge came a very creditable lot of Pears, albeit the district is not well suited to fruit culture. Considerable interest, too, attached to a hybrid set of Marrows, of which doubtless more will be heard in the future. The commercially grown Crotons from Edmonton were of a high order of merit. Hardy plants were well represented, Michaelmas Daisies being very fine. Sprays of cut trees and shrubs demonstrated the high leaf ornament of these at this season. No Orchid groups were staged, though five important new Orchids gained awards. The floral committee granted awards to four novelties. For descriptions of these see "New and Rare Plants," page 512.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. R. C. Notcutt, R. Hooper Pearson, J. Green, E. A. Bowles, W. J. Bean, G. Reuthe, C. B. Fielder, F. W. Harvey, J. W. Moorman, J. Dickson, H. J. Jones, A. Turner, C. E. Pearson, W. P. Thomson, E. H. Jenkins, J. W. Barr and James Hudson.

The magnificent group of Roses set up by Mr. G. Prince, Oxford, attracted much attention by reason of its variety and excellence. For the month of October the flowers were charmingly fresh and good, while in not a few instances the normal or summer colour was distinctly heightened. Of the new Hybrid Tea *Josephine Nicholson* quite an imposing central group was staged, the fresh self pink colour showing to great advantage. Other excellent varieties were *Rayon d'Or* (deep yellow and in considerable quantity), *Lady Pirrie* (rich salmon), *Mrs. Herbert Stevens* (white), *Snow Queen* (the revised name of *Frau Karl Druschki*), *Liberty*, *Lady Hillingdon* and *Mrs. A. Tate*.

Messrs. H. J. Jones, Limited, Lewisham, S.E., showed a table of Michaelmas Daisies, for which a silver Flora medal was awarded. The group was admirably displayed, bold, effective, full-length sprays producing what is so much needed at exhibitions, viz., good garden effect. Prominent varieties were *Silver Queen*, *Don* (a fine clear blue), *Henri Adams* (deep blue), *Bianca*, *Lil Fardell* (rosy red), *Queen* (palest mauve), *Climax*, *White Climax*, *Sirius* (rose) and *Magnet* (clear blue).

Mr. W. Wells, jun., Merstham, showed herbaceous Phloxes, such as *Frau Ant. Buchner* (white), *America* (pink), *Le Mahdi* (blue), with *Asters Climax* and *cordifolius* Photograph, and *Erigeron Quakeress* (a rather delicate mauve-coloured kind characterised by great freedom of blossoming).

Messrs. J. Cheal and Sons, Crawley, had an exhibit of cut shrubs and trees valuable for foliage effects. Of these, *Crataegus prunifolia*, *Pyrus Aucuparia discolor* (very fine), *Prunus Moseri* fl.-pl., *Baccharis halimifolia*, *Amelanchier canadensis*, *Acer japonicum laciniatum* (very fine), *Tamarix hispida æstivalis* and *Kolreuteria paniculata* were some of the finest examples. Many species of Oak were also brilliantly coloured, the effect of the whole remarkable in the extreme.

The Misses Hopkins, Shepperton-on-Thames, showed a small collection of alpine. *Sedum pulchellum*, *Potentilla Tonguei*, *P. willmottiana*, *Tunica Saxifraga*, *Teucrium Polium aureum* and *Hypericum reptans* were interesting examples in flower.

Messrs. Allwood Brothers, Hayward's Heath, showed Carnations. *Salmon Enchantress*, *May Day*, *Wivelsfield White* and *Princess Dagmar* were some of the more important in a nice lot.

Messrs. G. and A. Clark, Limited, The Nurseries, Dover, showed *Helianthus sparsifolius*, *Armeria gigantea*, *Cimicifuga simplex*, *Zauschneria californica* and a variety of *Aster Amellus*.

Mr. C. Engelmann, Saffron Walden, showed Carnations, such as *White Wonder*, *Fanny* (fancy), *Mrs. C. F. Raphael*, *Sunstar* (yellow), *Carola*, *Scarlet Carola*, *White Enchantress*, *Lady Meyer* and *Lady Northcliffe*. *Circe* (heliotrope fancy) was very good. It is one of the most attractive of its class.

Mr. Amos Perry, Enfield, showed good hardy flowers, such as *Helianthus sparsifolius* (very fine), *Kniphofias*, *Senecio pulcher*, *Erigeron Amos Perry* (mauve), *Aster St. Egwin* (rose), *A. Amellus Distinction*, *Helenium autumnale rubrum*, *Kniphofia Macowanii* and *Armeria plantaginea gigantea*. *Dianthus Napoleon III.* was finely presented in flower.

Messrs. Barr and Sons, Covent Garden, showed Michaelmas Daisies, early-flowering *Chrysanthemums*, *Kniphofias* in variety, a delightful lot of hybrid *Nerines* and Autumn Crocuses, such as *C. pulchellus*, *C. speciosus*, *C. hadriaticus* (white), *C. saundersianus* (white) and *C. cancellatus albus* (white, lined with faint blue). Some *Gladioli* were also shown.

Mr. Ernest Ballard, Colwall, Herefordshire, showed a table of new Michaelmas Daisies, such as *Glory of Colwall*, *Mira*, *Peggy Ballard* (double blue), *Ragtime* (rosy mauve) and *Edith Goodwin* (fine blue). *Rosy Morn* was also pleasing and effective. *Cloudy Blue* (award of merit) is virtually a mauve blue counterpart of *Beauty of Colwall*. It is very charming.

Messrs. Stuart Low and Co., Enfield, showed Carnations *Yellow Prince*, *Baroness de Brienon*, *British Triumph*, *Snowstorm*, *Enchantress Supreme*, *White Enchantress*, *Satin Robe* and *Salmon King*. The new *Princess Dagmar*, crimson (see "New and Rare Plants"), was also noted.

THE GARDEN.

No. 2240.—VOL. LXXVIII.

OCTOBER 24, 1914.

NOTES OF THE WEEK.

Raiser of Rose Excelsa Honoured.—The Hubbard gold medal, offered by the American Rose Society for the best Rose of American origin introduced within five years, has been awarded to Mr. M. H. Walsh of Wood's Hole, Mass., for raising the rambler variety Excelsa. We have already had considerable experience of this fine crimson Rose in this country, and predict that it will, before many years have elapsed, oust Crimson Rambler from our gardens.

A Black Apple.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. I. A. Walker of Woodberry, Sydenham Hill, S.E., sent a perfectly black Apple. Only once before has an Apple having this appearance been shown before the committee, and on that occasion Dr. M. C. Cooke attributed the appearance to an attack of the fungus *Sclerotinia fructigena* (= *Monilia fructigena*), the cause of brown rot of various fruits.

Doronicums in Pots.—The Leopard's Bane is a well-known bedding and border plant; but it is not widely known that *Doronicum plantaginifolium*, taken up from the open ground and potted now, will flower well early in the new year if gently forced in a temperature of from 45° to 55° by night and 65° with the heat of the sun by day. Its value as a decorative plant in a cut state needs no recommending, and to get it at that time of the year would greatly increase its value, for its bright yellow flowers last fresh for a long time.

A Beautiful Climber for a Sunny Aspect.—*Tecoma grandiflora* is one of the most beautiful of climbers, and flowering as it does so late in the summer and autumn, it is particularly valuable. This year it has been flowering with exceptional freedom in many places, its terminal panicles of large, trumpet-shaped, orange scarlet flowers being very conspicuous. It should be planted against a south wall where it can get all the heat possible. Wood of the previous year should be cut back in the spring, but apart from this no other attention is required. It was introduced from China and Japan about 1800, but is not often seen. *T. radicans*, from North America, much resembles it, requiring a similar position and treatment.

An Interesting British Seashore Plant.—*Convolvulus Soldanella*, perhaps better known as *Calystegia Soldanella*, is among the few but distinct plants that constitute the flora of the coast sandhills. Next to the blue Sea Holly (*Eryngium maritimum*), this handsome Bindweed, with its large pink flowers, is most conspicuous, rambling among the curious formations of wind-blown sea sand, although

summer and early autumn. It is best raised from seeds sown early in autumn.

Buddleia Colvillei Flowering in October.—Messrs. R. Veitch and Sons of Exeter kindly send us a flowering spray of this handsome hardy shrub, with the intimation that it is now flowering in their Exeter nursery for the second time this year. It would be interesting to learn whether it is producing its second crop of rose pink flowers in other parts of the country.

A Beautiful Autumn-Flowering Shrub.—In our issue for October 10 we published a note on sprays of *Escallonia montevidensis* sent us by Mr. J. E. Sanders of Redruth. At the request of several readers we publish herewith an illustration of flowering sprays of this charming shrub, which is often known in gardens as *E. floribunda*. The blossoms are pure white, and at a little distance the inflorescences have the appearance of white Lilac. In the southern and western counties of England, and also on the west coast of Scotland, this shrub has proved hardy. In common with other members of its race, it appreciates well-drained soil that is rather on the sandy side, and if the garden is an exposed one it is safer to plant against a wall with a southern or western exposure. Late summer and autumn flowering shrubs are by no means plentiful, hence we ought to make full use of those that are available.

Shirley Poppies in October.—One of the most charming features in the gardens at Hampton Court just now is a colony of Shirley Poppies growing close by the famous vinery. These are in full flower and look as vigorous and healthy as we are accustomed to see them in July. Evidently the plants are the result of sowing seeds during June or July, a practice that might well be adopted with a number of other quick-



FLOWERING GROWTHS OF ESCALLONIA MONTEVIDENSIS. A BEAUTIFUL SHRUB FOR THE AUTUMN.

growing annuals. We record the feature now so that readers may make a note of it in their garden diaries for next year. While writing of the gardens at Hampton Court, it is interesting to note that the names *Aubrietia* and *Swainsona* are spelt wrongly on the labels there. The former has lost an "i" and the latter has gained one. It is a small matter, but one that ought to be remedied

it does not occur so frequently as the *Eryngium*. It is an interesting plant, as the stems run under the surface, and only the small, thick, fleshy leaves and large pink flowers rise above the bleached sand and enjoy the full power of the blazing sun. It will succeed quite well in our gardens if planted in sandy soil in full sun, and will be an object of beauty during

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Chrysanthemum Shows for the War.—I note in your recent issues that many Chrysanthemum shows are not to be held this year. No doubt the same number of blooms and plants have been grown this season, and no doubt, also, thousands of lovers of the Autumn Queen will be keenly disappointed at not being able to get a glimpse of some of them. I suggest, therefore, that growers (amateur and professional) might invite all and sundry to inspect their respective displays, making a charge of, say, sixpence, and, after defraying any incidental expenses, the balance might be sent to the War Relief Fund. Such as are willing to do this could send you their names and addresses for publication.—M. E. G., *Beckenham*. [We shall be pleased to publish the names and addresses of those who fall in with our correspondent's suggestion.—Ed.]

Cotoneaster horizontalis.—The bright scarlet fruits of this Cotoneaster are highly pleasing at the present time, but it will not be long before

uncommon for the white variety to fruit, but it requires a hot, dry season like the present or that of 1911 to bring the fruits to reasonable maturity. The tree here fruited in 1911, but I have never seen any fruits on the pink variety that we have. The size of the best fruits would be as large as Walnuts before the green hulls have been removed.—C. TURNER, *Ken View Garden, Highgate*.

When to Plant Tulips.—With regard to the Editor's note at the end of my paragraph on the above subject in *THE GARDEN* of October 10, page 490, expressing a desire to know how our late-planted Tulips behaved the following season, I regret to say that I have no record or recollection of this. Being a cheap variety, they would most likely be planted among a mixed lot, as I attached no great importance to the matter at the time.—CHARLES COMFORT.

—As a mild Tulip maniac I, naturally, have been interested in the correspondence relating to the above, more particularly with regard to late-flowering varieties, of which I grow a considerable number. So far as my own experience goes, it makes little or no difference whether Darwin and Cottage Tulips are planted early or late. At least the only difference I have

were shown in. I found they were M. Pernet-Ducher and his daughter and a representative of the *Daily Mail*. Mlle. Pernet-Ducher spoke excellent English, and stated the case on behalf of her father, who did not speak English freely. The point was, the *Daily Mail* people would like the new Rose Mme. Edouard Herriot—which the day before had been awarded their gold cup—named the *Daily Mail* Rose. I pointed out that no such condition attached to the offer of the cup in the schedule, and therefore it must be a matter of arrangement between M. Pernet-Ducher and the paper in question. The Directors of the "International" had no duty in the matter further than to carry out the judges' decision and present the cup to M. Pernet-Ducher. M. Pernet-Ducher explained why he could not name the Rose the *Daily Mail* Rose—"It had already been named after his dear friend, the Mayoress of Lyons." I suggested that the other side might be satisfied by putting "the *Daily Mail* Gold Cup Rose" in parentheses after the name Mme. Edouard Herriot. It was the only way out, and we smilingly shook hands all round.—W. CUTHBERTSON, *Edinburgh*.

An Interesting Exhibit of Hybrid Marrows.—At the Royal Horticultural Society's exhibition held at Vincent Square on the 6th inst., a group of hybrid Vegetable Marrows shown by Mr. F. Herbert Chapman of Rye, and the raiser of the now well-known yellow Freesia bearing his name, created considerable interest. At a time like the present, when the value of all kinds of home-grown food is appreciated, we think particulars of these Marrows will be of interest to our readers, and Mr. Chapman has kindly furnished us with the information given below. We understand that the whole of the collection has been sold to Messrs. James Carter and Co., so that the public will no doubt, in due course, be able to obtain seeds. The exhibit, illustrated herewith, received a silver-gilt Knightian medal, awarded by the unanimous vote of the fruit and vegetable committee. Mr. Chapman writes: "The series of Marrows exhibited by me at the Royal Horticultural Society's meeting all originated from a cross made several years back between the Custard Marrow and the variety Table Dainty, the former being the seed-bearing parent. Being always a believer in flavour in vegetables as opposed to size, it had often occurred to me that if the delicate and rich flavour of the Custard Marrow could be imparted to a fruit more amenable in shape to culinary uses, a point would be gained. All who have practised hybridising for some few years become aware that it is a game of surprises, but I was scarcely prepared for the number and variety of types which evolved from this one individual cross. Although almost all on the small side, yet the variations in shape, colour and marking are most pronounced and remarkable. Between fifty and sixty dishes were shown, and there were nearly that number of quite distinct types, ranging through all the shapes of the present commercial varieties, with the addition of fruits resembling a balloon, a Ridge Cucumber and other queer forms. In colour, too, they run from pale cream through all shades of green, striped and mottled, to a green which is almost black. In some the true Custard flavour is quite pronounced, and when the best types are selected and thoroughly fixed I am ambitious enough to hope that a useful addition will have been made to our none too long list of delicate and toothsome British vegetables."



THE INTERESTING COLLECTION OF HYBRID VEGETABLE MARROWS RAISED AND EXHIBITED BY MR. F. HERBERT CHAPMAN.

they fall to the ground, unless eaten by the birds. Self-sown seedlings frequently appear in my garden, some of them at a considerable distance from the parent plants, the produce, no doubt, of berries carried by the birds.—S. ARNOTT.

Crab Apple Jelly.—As Crab Apples are so plentiful this year, and are now ready for making into jelly, we are pleased to publish the following recipe kindly sent us by a lady correspondent: "To 9lb. of Crab Apples add 3 quarts of water. Boil the Apples until they go to a pulp. Then strain through a jelly bag, measure the juice, and allow three-quarters of a pound of sugar to each pint of juice. Add the sugar; then put into the pan and well boil for twenty minutes."

Fruiting of Double-Flowered Peach.—Neither of the correspondents who have written on this says whether he refers to the white or pink flowering Peach. We have a specimen of the former about eight feet high and six feet through which has had quite four dozen fruits (some still hanging), the bulk of which have been of quite an acceptable flavour. Besides being edible in the raw state, these fruits are very good when stewed, also for making tarts. It is not altogether

observed is that bulbs planted in December are a few days later in blooming than those planted in October or left in the ground from the previous season. Having such a number, I make a point of lifting about half my stock each year, so that all the bulbs have two seasons of blooming before being lifted. When left more than two years, the bulbs deteriorate somewhat, especially when grown in a herbaceous border or among Roses, as I am forced to grow mine. There certainly is no advantage in planting late-flowering Tulips before October, for even when left in the ground the bulbs do not start making root until October; in fact, I have recently lifted bulbs that did not show any signs of starting.—T. A. WESTON. [This failure to start is probably due to the excessive drought.—Ed.]

An Unreported Incident at the "International."—A *propos* the article in your issue for October 10 entitled "Rosa Pernetiana, 1838—1914," I am reminded of an interesting incident at the International Show. One morning—the morning after the awards had been made—I was on duty representing the Special Jury in the Directors' Room. Two gentlemen and a lady

ROOT PROPAGATION OF HARDY HERBACEOUS PERENNIALS.

NO phase of gardening is more fraught with interest than the general propagation of plants. That numbers of plants reproduce themselves a hundredfold by means of their roots is well known, and we have instances of this in mere weeds, as, *e.g.*, the Dock and the Dandelion, or in the garden in certain sections of the Michaelmas Daisy. In these directions, however, the knowledge we possess of these facts is of service in assisting to keep such rampant-growing plants within proper limits. But other plants display a marked tendency to reproduce their kind by means of roots, which, however, are of little value to the gardener for some reason or another. Of these the Heleniums and the Phloxes are instances, and as the plants are easily increased by cuttings or division in the usual way, their multiplication by any other means is neither desirable nor profitable. But there are other instances where root propagation is of much value, and particularly so in those cases where the plants, producing no cuttings in the usual way, are also difficult to increase by seeds or division of the roots. Now and again one meets with a plant which rarely produces a fertile seed in this country at all, and which is also almost impossible to increase by the ordinary methods of division. Such a plant is *Senecio pulcher*, an invaluable plant during the late summer and early autumn months, and one but rarely seen in good condition. Hence root propagation in such a case is of great value, and prevents so good a plant being lost to cultivation altogether.

From another point of view, root propagation is of great value to the specialist, as by its means selected examples of certain plants which cannot be relied upon to come true from seeds may be readily increased and always prove true to their kind; that is to say, while the flowers or seeds are exposed to cross-fertilisation by insects, the roots still retain the true character of the individual plant in its entirety.

Quite recently many of our readers have made enquiries into this method of plant propagation, and the subject being of a seasonable nature, we give in greater or less detail the essential items for its successful adoption. Happily for those interested, the work may be carried out during the winter season, and, indeed, the dormant period of the subjects is the best time. What has to be done is to lift a good-sized plant from the open ground and detach as many of its roots as may be deemed expedient and safe. The detached roots should then be taken to the potting-shed and cut into lengths of about 1½ inches, taking care at this juncture that the uppermost ends of the roots, *i.e.*, the end which was nearest to the rootstock before being cut away, are kept uppermost throughout. By laying the root lengths in order as cut, no subsequent confusion need exist on this head, and the work of cutting up completed, the root-cuttings should be forthwith inserted. The manner of dealing with these cuttings subsequently is to prepare some well-drained pots or pans, the former for preference, and slightly more than half fill them with rather sandy soil. At this point it will be necessary to gauge the cuttings and to

determine whether more soil should be added to the pots or some removed. When the cuttings are inserted and the work completed, the apical portion of the cutting should be just visible above the surface of the soil and level with the rim of the pot, the cuttings being placed around the interior of the rim in a not quite upright position. In this way the operator can judge for himself as to the work being rightly done. The cuttings should be placed around at about a quarter of an inch apart or thereabouts, or at a greater distance if there is no scarcity of room. When the root-cuttings are in position, the remaining space should be filled with soil, taking care not to displace the cuttings in doing this. By making the soil of a sandy nature, new root-fibres are more quickly formed when, presently, top growth begins. The best position for these pots of root-cuttings is in the greenhouse frame, where a slight warmth, say, of 45° or 50°, obtains. Given one good watering when the work is completed, the pots in the position and warmth suggested will require no more for a fortnight. If no frame is at command, the pots of cuttings may be plunged in fibre or sand in pots of much larger size, and, by placing a sheet of glass over all, secure that degree of uniformity which is so desirable.

All that is now necessary is a little patience, and a month or six weeks may elapse before any signs of new life are seen from the apices of the cuttings. First we see a swelling or callusing of the surface, and subsequently miniature protuberances that develop into shoots, the latter often appearing quite numerous. So much so is this the case that in the larger-rooted species of plants, such as *Anchusa italica* and the Japanese *Anemones*, it has been found desirable to halve or even quarter the roots longitudinally before inserting them. The most serviceable size of root is that about the equal of a cedar-wood pencil for the largest, and say half that size for the smallest. This way the largest roots are secured to the plant. Though I have recommended covering the cuttings with a glass frame, care should be taken to ventilate now and again and to avoid that wet, stagnant condition which may give rise to decay rather than growth. Forcing by an excess of heat is injurious, and will merely produce the top shoots before any root-fibres are present to sustain life. Fleshy roots full of vitality are essential; old roots that have become hard and wiry are usually valueless. The after-treatment of these root-cuttings, and when they shall have become little plants, is simply that given to small seedlings requiring to be individualised to produce the best results; and when this is done the genial conditions of a frame or a greenhouse will be found highly beneficial. There need be no hurry to do this, however, and only when small leaves appear, giving evidence of activity at the root, should the work be taken in hand. A host of plants respond to this particular treatment, but I have no intention of preparing an exhaustive list. A few of the most important, however, are *Anemone japonica*, *Anchusa*, *Gaillardia*, *Senecio pulcher*, *Primula* (the roots of which are small), *Stokesia*, *Eryngium*, *Echinops*, *Statice* and the perennial *Poppy*, none of which, save the *Anemone*, affords the least external evidence of an amenability to respond to a method of treatment which is as valuable to the gardener as it is interesting and instructive to the student.

E. H. J.

NOTES ON CARNATIONS.

Propagating Perpetuals.—There exists such a pronounced diversity of opinion regarding the time most suitable for propagating Perpetuals that a brief pronouncement on the benefit of autumn propagation may be permitted before proceeding to details. Those who, quite reasonably, defer propagation till after the New Year opine that nothing is gained by rooting the plants earlier, and that as much progress is made by plants prepared on their system as by those rooted in the autumn. Very much must depend in either case on the condition of the plants that provide the cuttings, and on the treatment the young plants receive. It is obvious that, in the less southerly parts of the country, plants which have been in a glass structure for three to four months cannot produce equally satisfactory cuttings to plants which are only newly put under house treatment; and while it is true that autumn-struck plants make very slight progress up till January, they do possess a decided advantage in having a root economy far in advance of those struck in that month, and this gives the young plant when it is hard pinched a dynamic force which produces a strong early framework, or foundation, rather, that a late-rooted plant cannot in the nature of things ever overtake. These are the two chief points in which, in my opinion, autumn propagation has the advantage of propagation early in the year; that is to say, a better type of cuttings is available, and a healthier, more robust type of plant results. I think, too, that cuttings are rooted with more facility in the autumn than at the more advanced period.

The Best Cuttings.—There is nothing new that can be said regarding the shoots which produce the best cuttings, long experience showing how those produced well up the stems are the most prolific of bloom. Moderately strong shoots are to be preferred; but it is not important, as some think, to secure or retain a heel to the cutting, one cut across under a joint, or, indeed, above a joint, rooting quite as well, and usually making a shorter type of plant.

For the last year or two I have had the cuttings put three in a 2½-inch pot in the usual sand, the reason for this being that the rooted material is more easy to handle. The pots are plunged in a propagating-bed, the material kept wet and the temperature 55° to 65°, roots being emitted in time to permit removal from the propagating-bed in twelve days onwards. It will be seen that the cuttings are for so brief a period subjected to what many would conclude to be a dangerous heat that no harm can possibly come to the plants.

Cuttings Flagging.—Not a few beginners fail at this early stage through allowing the cuttings to flag. This is fatal. If the moisture is not sufficient to provide against flagging, then glass should be placed over them till roots are emitted. No delay must occur after rooting and a few days' subsequent hardening on a bench or stage in potting the young stuff singly into 2½-inch pots, using a sandy, open compost and merely knocking the pots gently to settle the soil about the roots. In a warm structure root action will begin at once, and in a short time the plants should be transferred to a cool structure, growth at this time of the year being of no importance. Once the soil in the 2½-inch pots is ramified by roots, shift on without delay, and by no means indulge in stopping. If stopped, only one or two

breaks will be made, and these weak ones. Leave this cultural expedient till January at the very earliest, when breaks will be produced abundantly and strong shoots follow. R. P. BROTHERSTON.

THE AUTUMN TREATMENT OF LAND.

(Continued from page 512.)

For Sowing or Planting in February and March.

Much land may not be ready for cultivation till the spring; the following crops are suitable for land that has been lying vacant during the winter. Work may begin in February or as soon as genial weather sets in:

1. Potatoes .. Early varieties.
2. Beans .. Broad and Kidney.
3. Peas .. Early and mid-season.
4. Cauliflowers Early.
5. Round Spinach.
6. Spinach Beet.

1. Potatoes.—The land should be thoroughly dug and forked during the winter and worked into a friable condition. The common distance to plant for first-early varieties is 4 inches in depth, 12 inches between the sets and about 20 inches between the rows. For midseason and late varieties the sets may be 15 inches apart and 24 inches to 30 inches between the rows. For further information see Leaflet 173 on Potato Growing.

2. Broad Beans.—Plant $3\frac{1}{2}$ inches to 4 inches deep, with 18 inches to 24 inches between the drills and 4 inches between the seeds.

Kidney Beans.—Plant 2 inches deep, 2 inches to 4 inches apart in the drill, and 18 inches to 27 inches apart in the rows. One pound of seed will plant 150 feet to 200 feet of drill.

3. Peas.—Sow in a flat drill from 2 inches to 3 inches in depth according to soil—in stiff soil shallow, and in light soil deep. Dwarf varieties should be sown in rows 18 inches to 2 feet apart; tall varieties further apart according to height. Early Peas require 1lb. to 70 feet of drill; late varieties 1lb. to 85 feet of drill.

4. Cauliflowers.—The distances are the same as for Cabbage.

5. Round Spinach.—Sow 1oz. of seed to 65 feet of drill, about 1 inch deep, in rows 12 inches to 15 inches apart.

6. Spinach Beet.—Sow as for Round Spinach, but thin out to 8 inches or 10 inches apart in the rows.

Information as to the application of fertilisers to these crops will be found in Leaflet 106.

CLASS B.—GOOD GRASS LAND BROKEN UP FOR SPADE CULTIVATION.

A great extension of allotments and other holdings under spade cultivation may also take place. Many acres of grass land might be utilised in this manner, especially in the neighbourhood of large towns. Such land must be treated in a different way to the cultivated land described under the previous heading.

In the first place the land should be bastard trenched. To begin with, the turf should be skimmed off in a thin layer 2 inches to 3 inches in depth from a trench, which should be 18 inches to 2 feet broad. The first spit of soil immediately below the turf should be removed. The bottom soil should then be stirred to a depth of 6 inches with a pick, digging fork or spade according to the nature of the subsoil. The turf layer from the next trench should then be laid upside down on the stirred bottom of the first trench, and the first spit of soil placed above it. This process should be continued till all the land has been dug over, the turf and first spit of soil from the first trench being used to level up the last. Land of this character is often very fertile, and should give a good yield



THE CATMINT (NEPETA MUSSINII) GROWING IN A DRY WALL.

of Potatoes or other planted crop the following summer. It can, however, seldom be used for crops raised from small seeds in the same year as it is broken up, for two reasons—(1) unless the turf is very good and free from weeds, the result of the cultivation may bring up and favour the growth of a number of weeds which have hitherto been kept under. A good deal of hoeing may be necessary to keep these down, and this may interfere with the seedlings. (2) Old grass land is often infested with wireworms (the young of the click beetle) and leather-jackets (the young of the daddy-long-legs). These insects may completely destroy the crop as soon as it begins to grow. Treatment for these pests is given in Leaflets 10 and 11, but as the methods advised may not be available at the present

time, the land should be frequently hoed and the weeds kept down so as to deprive the insects of their food for some months. Lime may also be worked into the land.

CLASS C.—DERELICT LAND.

In many districts fertile grass land will not be available for cultivation by spade labour, and if additional land is to be brought under tillage, poor soil or waste land must be broken up. There are many acres of land of this class available, especially in the neighbourhood of large towns, but care is needed in treating it if it is ever to bear a satisfactory crop. The following treatment is recommended: In the first place, all rank growth of weeds should be cut down with a scythe. If the weeds are of a soft nature, they might be put in heaps with any available grass for making into a compost, or if annuals and free from ripe seeds, they may be dug in at once. If of a fibrous or woody nature, they should be burnt. The land might then be skimmed and bastard trenched as before advised, but the greatest care must be taken (1) not to bring the subsoil to the top, and (2) to clear out the roots of such weeds as Docks, Couch Grass, Creeping Buttercup, Convolvulus, Nettles, &c. Time spent in the careful eradication of such weeds will be well repaid.

Land of this character, when freed from weeds and properly trenched, will bear a useful crop the following year if properly manured. As stable or farmyard manure will probably not be available in such places, it will be necessary to supply the plant food from other sources. The chief ingredients required to secure satisfactory growth are (1) nitrogen, (2) potash, (3) phosphates. Nitrogen can be supplied by digging in all soft vegetable matter such as grass, leaves of trees, and decaying vegetable matter of any sort. The manure of any kind of animal may be used. Poultry and pig manure should be well mixed with earth on removal from the pens or sties before applying it to the land. Potash may be supplied by collecting and burning all kinds of woody material, such as hedge clippings, prunings from trees, &c. The ash should be carefully saved in bags and kept dry. It is especially useful on land that is to be cropped with Potatoes.

Seaweed is a valuable potash manure, and should be collected at all rocky sea coasts (see Leaflet No. 254). Phosphates will not be easy to supply from natural sources, unless large quantities of fish waste are available, but phosphatic fertilisers such as basic slag, superphosphate and bone-meal should be easily procurable through the usual trade sources. Lime will be required in many cases, and should always be applied to rich pastures after breaking up. It should be worked into the surface layer when the land is dug. The advice as to insect pests and weeds under Class B applies with even greater force to this class of land, and great care should be taken to get rid of both before the land is sown or planted with any crop.—*Board of Agriculture's Special Leaflet No. 1.*

DRY WALLS IN SUMMER AND WINTER.

IN common with most other features of the outdoor garden, the dry wall is more beautiful and interesting during the summer months than in winter; yet where proper thought is given to winter effect, quite good results can be obtained even during the shortest days. There are a number of plants which are beautiful at both seasons, one of the best known, perhaps, being *Cerastium tomentosum*. In the accompanying illustration, which represents dry walls during the early summer, a large cluster of this is shown just to the right of the bold stone

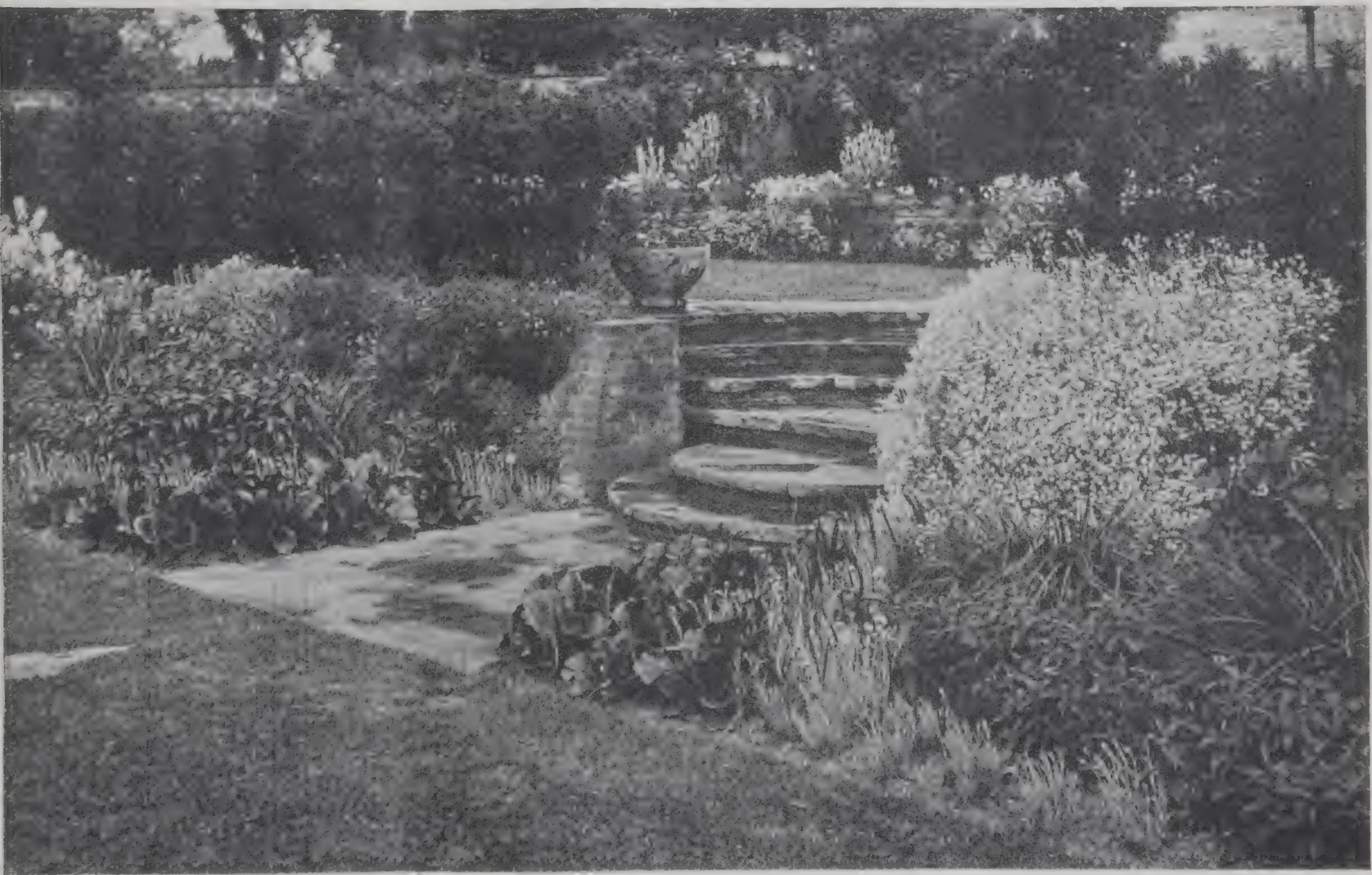
that come to mind as being suitable for adding splashes of colour and some considerable interest to the dry wall during the winter season. In the other illustration we see a particularly useful plant for winter effect, viz., the Catmint (*Nepeta Mussinii*). This is beautiful in summer when laden with its lavender blue flowers, while in winter its glaucous-hued foliage harmonises well with that of our garden Pinks. G. B.

FINGER AND TOE DISEASE IN GREEN CROPS.

THE past summer has been particularly favourable for the spread of the disease of Cabbages, Cauli-

At this time of the year the swollen roots of in the ground and the fungus granulates and forms myriads of spores, which escape into the soil ready to attack future crops. It is important that measures should be taken at once to remove all plants that are badly attacked, also all stalks of Cabbage, Cauliflowers and other greens from which the heads have been gathered. The diseased roots should be burned at once, and not thrown into heaps to decay, as is too often the case.

Another method of checking the spread of the disease is during the autumn to dress the land on which Brassicas are to be grown next year with quicklime at the rate of about half a bushel to 30 square yards. Earth-slaked lime is the best form to apply, although ground white lime



A DRY WALL AND STONE STEPS IN SUMMER. MANY OF THE PLANTS WOULD ALSO BE BEAUTIFUL IN WINTER.

steps, its small white blossoms being borne in such profusion as to give rise to the popular name of "Snow in Summer." In winter this plant would be a mass of silvery grey foliage that would contrast well with darker-hued plants that surround it. Pinks of many kinds, especially the old common Double White, may also be employed for the same purpose. Then there is the grey-leaved Cotton Lavender, the foliage of which is beautiful at all seasons. *Saxifraga apiculata*, which often opens its pale yellow flowers in January; dwarf Lavender bushes; *Cotoneaster microphylla*, with scarlet berries, to be planted in the soil at the base of the wall; Wallflowers of the Early Paris type; Edelweiss, with grey foliage; and the Cobweb Houseleek, which likes a dry position sheltered from heavy rains, are a few others

flowers and other Brassicas. The exceptionally dry weather has had the effect of checking the growth of the plants, and they have been unable to resist the attack. The diseased condition of the plants is so well known that a description is unnecessary. The disease is caused by a fungus (*Plasmodium brassicæ*) which exists in the soil during the winter (and, indeed, if no suitable host is present, for several years) in the form of minute spores. These spores are taken up by the roots of plants belonging to the Cabbage family, and once inside the roots they form a plasmodium or jelly-like substance, which feeds upon the contents of the cells. The presence of this foreign substance sets up an irritation which causes excessive growth to take place in the roots, eventually forming the swellings known as club, or finger and toe.

is very good. It is important that the lime should be dug into the ground as quickly as possible, as exposure to the air causes deterioration. Gas lime is helpful in checking the fungus, but it should be exposed to the air for several months before digging it into the soil, in order to get rid of the poisonous compounds which are always present in fresh gas-lime.

Earth-slaked lime is obtained by placing the lump lime in heaps over the bed to be treated, completely covering each heap for a few days with earth. Under these conditions the slaking takes place gradually and in the partial absence of air. For use it is only necessary to remove the earth covering and dig the powdered lime into the soil, scattering a little in each trench as the work proceeds. A. E. B.

THE LITTLE GARDEN.
FURTHER PRIZE DESIGNS IN OUR COMPETITION.

IN last week's issue all the first prize designs and some others were shown, and we now reproduce a further series. The five plans for Site No. 1, given at the foot of this page, show very well what a large variety of treatment is possible even within such narrow limits as are afforded by a little suburban garden.

The second prize for Site No. 1 was awarded to Mr. Burnett Orphoot. The feature of it is the skill with which a long grass alley has been secured on the south side of the house. This would yield a very pretty little vista from the seat under the trees in the main garden. The seat at the end of the grass alley would only be satisfactory when the roadside hedge had grown up. Otherwise the front garden is too much cut up and the borders are too narrow. The bed of Tree Pæonies is rather a disturbing element on the main lawn, and the planting scheme for the circular beds is not very well conceived. The hedge treatment at the back, cutting off the little space for frames and small crops, is well managed, and the herbaceous borders are adequate in width.

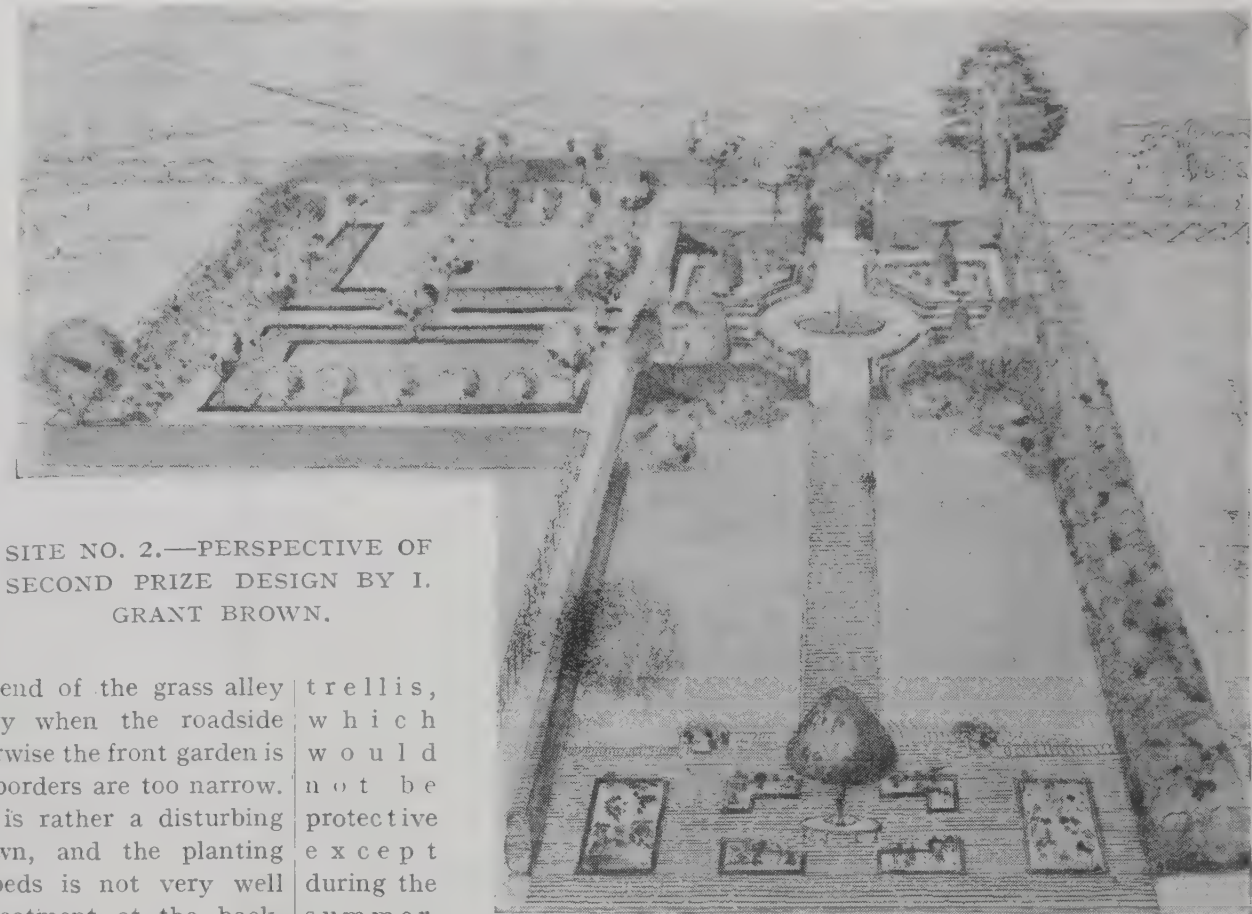
The third prize for Site No. 1, like the second prize for Site No. 3, went to one of our American readers, Miss Elizabeth Leonard of Cambridge, Massachusetts. Her practical outlook on the problem is shown by her provision of a drying-yard. This is somewhat imperfectly screened from the garden by a Sweet Pea

It would have been better if this drying-yard had been disposed at the end of the site. The stepping-stones provided in the grass on the south side of the house are not found in gardens of good English practice, but would be practical on soft ground. The tool-house and frames are neatly placed, and the vegetable garden divided well from the flower garden by a Privet hedge. The front garden is shapely; but Miss Leonard's weak spot in this, as in other of her designs, is the extreme narrowness of her paths. Taken as a whole, however, the design is thoroughly satisfactory, because it does not attempt too much, a common fault on very small sites, and it could be well managed by a householder of small means.

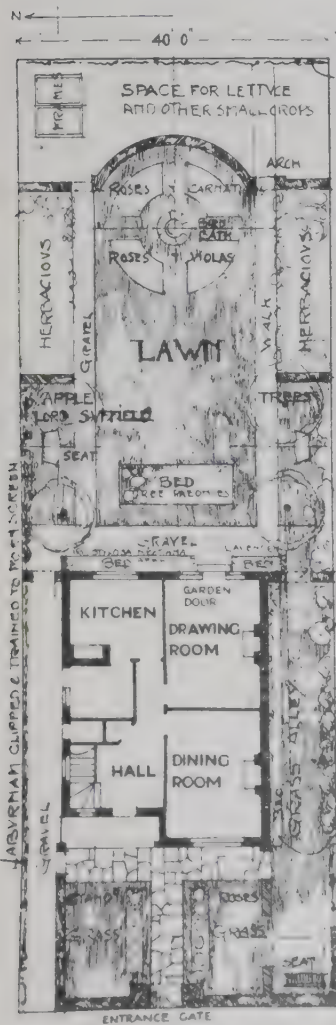
Of the designs for Site No. 1 to which book prizes were awarded, we now illustrate three.

Mr. Archie Paton has erred in the direction of cutting up too much the space at his disposal. Within such narrow limits such a feature as a sunk garden should not

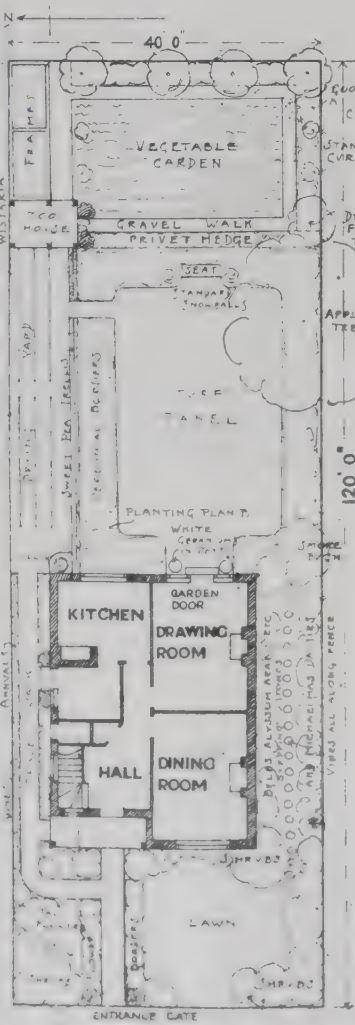
trellis, which would not be protective except during the summer, and the spectacle of the linen would not be very agreeable to the neighbours on the north side. have been attempted, especially as it necessitates a little system of drainage to prevent



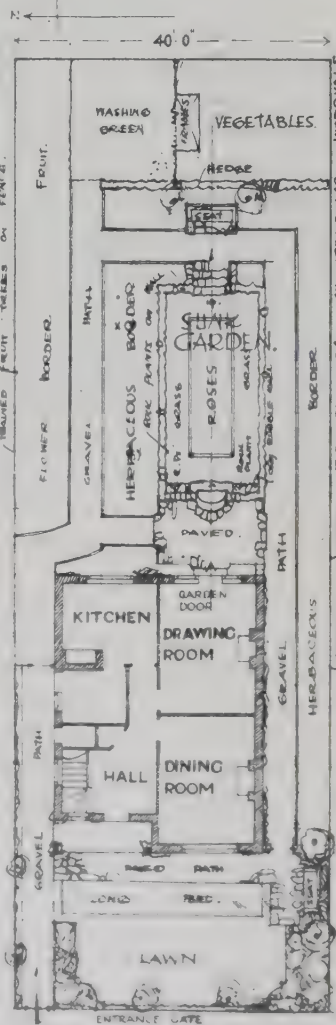
SITE NO. 2.—PERSPECTIVE OF SECOND PRIZE DESIGN BY I. GRANT BROWN.



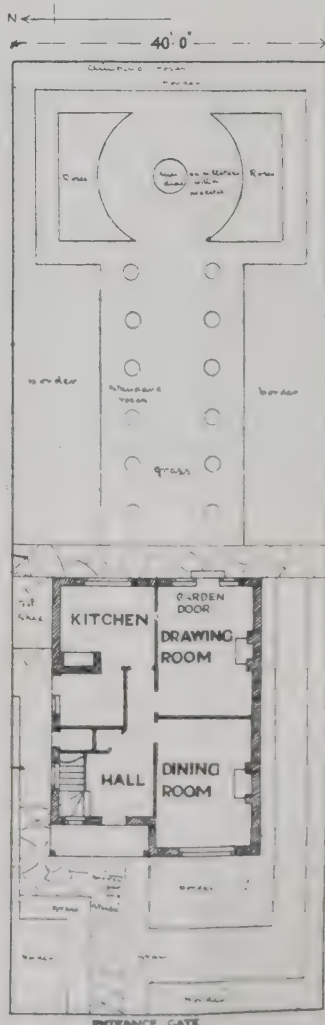
Second Prize.—B. N. K. Orphoot.



Third Prize.—Elizabeth Leonard.



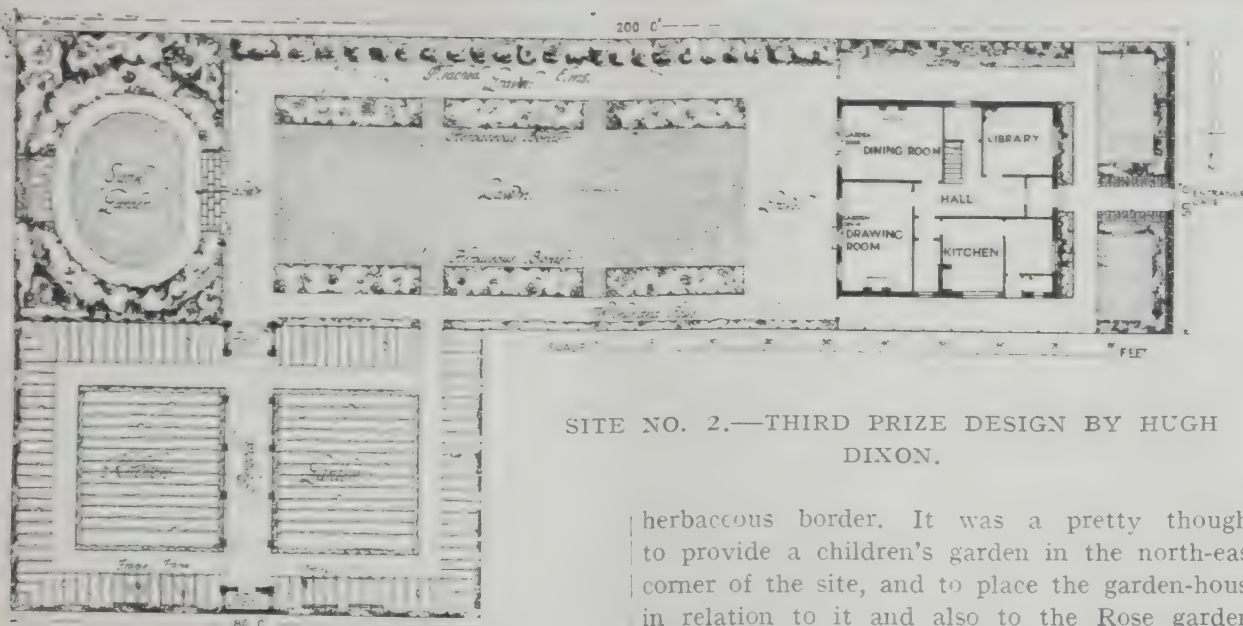
Book Prize.—Archie Paton.



Book Prize.—B. M. Cory.



Book Prize.—Isobel Harding.



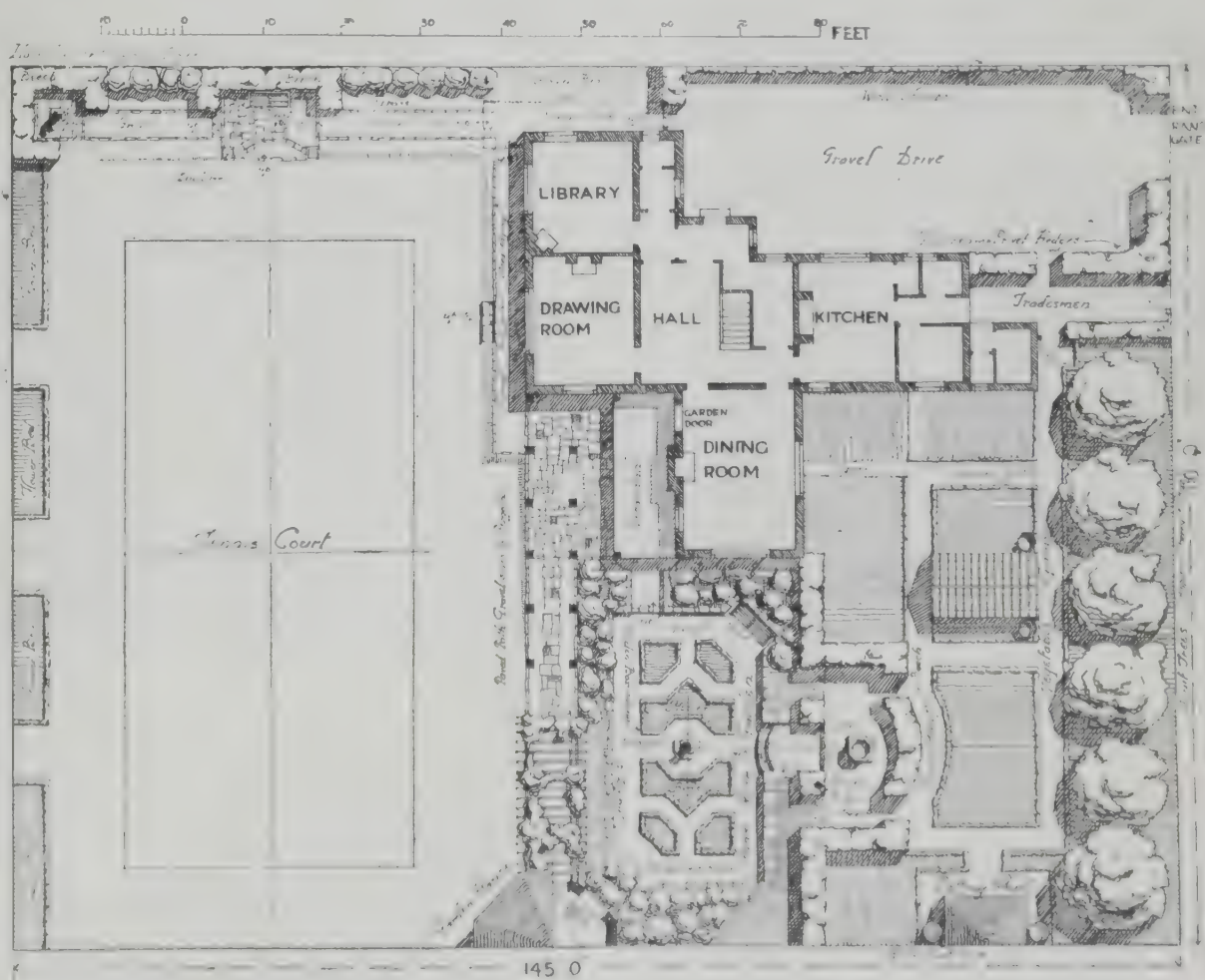
SITE NO. 2.—THIRD PRIZE DESIGN BY HUGH DIXON.

herbaceous border. It was a pretty thought to provide a children's garden in the north-east corner of the site, and to place the garden-house in relation to it and also to the Rose garden. Practical considerations have not been forgotten, for the frames are disposed in a space enclosed by a hedge. Miss Grant Brown's planting plans were thoroughly well considered, but the provision of a standard Holly on the brick-paved space outside the main sitting-room is a doubtful feature.

In the case of Site No. 2 the third prize was won by Mr. Hugh Dixon. The design is simple and straightforward, and its chief defect is that the treatment of the lawn bears no very direct relation to the house. In a garden of this size, moreover, it is very desirable that the

to the position of the pergola. This feature has achieved an immense popularity in English gardens, but its purpose and character are not always well conceived. It should ideally be used as a connecting link between two or more definite points in house or garden. It is appropriate, for example, to build a pergola leading from a house verandah to a summer-house. In the case of this plan, however, the pergola occupies a detached position, dividing the two parts of the kitchen garden and connecting an isolated arch with a not very attractive shed. Nevertheless, the competitor has deserved his prize by reason of the simple and unlaboured way in which he has utilised the site.

For Site No. 3 the third prize was won by Mr. Kenneth Dalgliesh. This design is dominated by the tennis court, which is correctly placed north and south. The flower-beds to the west of it are a somewhat doubtful feature. They would look rather patchy, and a continuous border would be more restful. The north end of the lawn is prettily provided with a seat and a statue of Pan, backed by buttressed Yew hedges connected by groups of Planes or Californian Limes, and attractively shown by a perspective to be reproduced next week. This feature would look well as seen from the library and drawing-room windows. The verandah is connected with a little garden-house by a long pergola, which divides the lawn from the flower parterre to the east. Backing the



SITE NO. 3.—THIRD PRIZE DESIGN BY KENNETH DALGLIESH.

area to be treated should be subdivided somewhat by walls, trellises or hedges, so that the eye may not take in the whole scheme at one sweep. There is no more valuable quality in garden designing than a touch of surprise. The visitor should be led from one point to another with a sense of expectancy, but that feeling would not be aroused in the garden which Mr. Dixon has designed. Criticism may also be directed

sunk Rose parterre and dividing it from the vegetable garden is another arrangement of hedges, either Privet or Beech, neatly composed with a well-head. The vegetable garden is well screened from the road by a rank of standard fruit trees, and due provision has been made for frames and potting sheds.

Further designs will be illustrated next week.

L. W.

it becoming a morass. A good point, however, is the arrangement of the garden on the axial line of the drawing-room garden door, with the vista terminating in a seat backed by a hedge. Behind this hedge is a little plot for vegetables and frames and a washing-green. The latter provision is typical of Scotland, where it is almost always made. Mr. Paton has arranged his entrance differently from most competitors, in that he puts the gate at the north-west corner of the site, and thus avoids cutting up the little garden in front.

Miss B. M. Cory's scheme is extremely simple, and she makes no attempt at providing any vegetable space. The treatment of the main garden is shapely enough with its broad borders flanking a grass plot studded with standard Roses. This leads to a little space with a sundial flanked by segmental Rose-beds. The main defect of the scheme is that too much bedding space is provided. There are borders on each side of the grass strips at the front and south side of the house, as well as those of varying width which are all round the main garden.

Another scheme much on the same lines, but more carefully worked out, is that by Miss Isobel Harding. She makes a main feature of eight shower Roses in circular beds, each approached separately from the main path which leads up the middle of the site. The shapely Yew hedge is a pleasant feature, and provides a suitable screen for a frame on one side and a few trees on the other. The curved outline of the raised borders makes a change, but the scale of the garden is really too small for little refinements of this kind. Good use is made of the south wall of the house for the growth of Plums. The entrance is well managed, and, assuming a good growth for the hedges, the space to the right of the gate would make a pleasant little garden.

The second prize for Site No. 2 went to Miss I. Grant Brown, and we show her design by the perspective which accompanied the plan. It represents the view which would be seen from the chief rooms of the house. The scheme shows skill and thought. Good garden pictures are seen from the dining-room and drawing-room across the brick-paved terrace and eastwards to the hedge which screens the lawn from the Rose garden. The kitchen garden is well screened by a Yew hedge running east and west, and is provided with a broad

ROSE-GROWING IN TOWN GARDENS.

Roses from Cuttings.—Of the several ways of propagating Roses, striking cuttings is by far the easiest, and therefore commends itself particularly to the town gardener whose time is limited. It is true that only the most vigorous varieties are likely to succeed and give satisfaction when increased in this way, but as these should form the major part of the townsman's stock, the method is often useful to him. It is an exceedingly simple process, which has frequently been described, and the directions need only be gone over here in order to emphasise those points which ensure success.

A Cutting is prepared from seasoned wood of the current year which has been removed

Best Varieties for Cuttings.—Those that are especially suitable for raising in the manner described are the *Wichuraiana*, *Multiflora* and other climbers, as well as Hybrid Teas or Hybrid Perpetual Roses of rampant growth, such as *Hugh Dickson*, *Frau Karl Druschki*, *J. B. Clark*, *Ulrich Brunner* and *Mme. Abel Chatenay*.

Layering.—Another useful method of raising own-root Roses is to peg down and layer branches just in the same way as one does with Carnations, forming a "tongue" where the stem is bent upwards by half severing the shoot in an oblique direction just below an eye. This tongue must be pressed well down into some sandy soil, and the shoot must be carefully tied into position so that it does not move. When rooting has commenced, it may be severed from the parent stem. Here, again, it is important to note that

HINTS ON PLANTING ROSES.

MOST amateurs are apt to afford Roses too rich a soil when planting, and as the season is close upon us once more, I would like to give a few practical hints, resulting from careful observations and experience among these popular flowers. There is one piece of advice in the cultural directions of almost all catalogues that needs a little qualification or explaining. They advise deeply dug and well-manured soils, and end by saying: "In fact, it is difficult to give the Rose too rich a soil." When growing strongly and able to assimilate such food, I agree with them; but not until the roots are well established would I dress the soil so heavily as it is often treated. Digging the ground deeply and applying a good lot of manure to the bottom soil, which we can never reach again, are correct enough; but it is more beneficial, as well as economical, to apply surface-dressings, and lightly fork these in when the roots are in a condition to assimilate the nutriment at once. I have known the soil so strong that the new roots could not even get a satisfactory start, and the whole had to lose much of its strength before they could forge ahead, simply because it was too strong in the first place.

There is another point not sufficiently borne in mind; that is, to supply manures more suitable to the soil. What will suit a light, sandy compost is by no means so good for a stiff and heavy soil. The latter needs soot, wood-ashes and a little bone-meal; also lighter animal manures, such as that from the stable. On the contrary, we should make use of night soil, pig and cow manure upon a light and porous soil.

The necessary drainage must be attended to upon

wet and cold soils, or all other labour and expense is more or less wasted. The time of planting is also of importance, and this a little in accordance with the nature of your soil. If naturally wet and cold, I would prefer early spring, choosing autumn or very early winter in the case of drier ground. Should the plants carry much wood, I would shorten this back at the time of planting; not exactly prune them, but lessen the strain upon the roots by cutting away about half of the wood. It is not wanted, for it is much safer to closely prune all Roses the first season of planting, and we may as well reduce long shoots now.

Do not choose highly fed plants with coarse and sappy growth; rather aim for medium-sized plants carrying riper and better-matured wood. Cut off any coarse or bruised roots, plant firmly, and be sure the junction of stock and Rose is a couple of inches below the surface.

A. P.



A GARDEN OF ROSES. NOW IS THE TIME TO PLANT FOR NEXT YEAR'S EFFECTS.

with a heel and is then trimmed by having the lower leaves removed. The top should be cut off, leaving the shoot from 9 inches to 12 inches long when ready for planting. A drill is made by cutting down about six inches with the spade and pulling it over slightly so that a V-shaped opening is made, in the bottom of which about half an inch of sand should be placed. The cuttings must be planted so that the base (or heel) of each rests firmly on the sand. During the winter months they should be looked over occasionally, and any that have been loosened by the action of frost must be pressed down and made firm again. By the following spring the base of each cutting will have callused over, and if the earth is then kept slightly moist, roots should be emitted during the summer. The best position for the bed is under a wall facing north, for it is important that the cuttings should be shaded when they are commencing to root.

the soil must be kept moist during the ensuing summer.

Division.—There is yet another method of increasing one's Roses which I have found particularly useful in dealing with Dwarf Polyanthas. These are for the most part of very free growth, producing basal shoots in great profusion, and if used for an edging to beds of other Roses it is not desirable that they should occupy too much space. In November those that have become bushy should be carefully lifted, and they will generally be found to have emitted roots from the bases of several large growths, which will allow of each being separated into two or three good-sized plants. If this is done with the secateurs, care being taken not to injure the roots, the growth of each piece should be fully equal to that of the parent plant.

P. L. GODDARD.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Cucumber Plants from which winter supplies are expected should now have reached the top of the trellis, and may be allowed to carry a few fruits, but nothing beyond what is necessary for the daily supply should be allowed to remain on the plants during the winter. Let the young Cucumbers be pinched off while quite small, so that they do not tax the energy of the plants. Constant attention to stopping and tying will be necessary, so that the foliage may not become crowded. Remove rough, overgrown leaves as it becomes necessary to make room for young fruiting shoots, which may be stopped at the first or second leaf beyond the fruit, according to the space available.

Peach Trees.—The pruning, washing and tying of permanent trees in the early Peach-house should be accomplished as soon as possible. Remove as much of the old wood as can be spared before the trees are untied, also shoots which have become too gross to bear fruit. The trees may then be carefully washed with soft soap and water, and if mealy bug is present in the house, the trellis and walls must be washed with some insecticide of sufficient strength to destroy it. While this is being done, care must be taken to keep it from coming in contact with the trees or the border.

Plants Under Glass.

Pelargoniums.—Young plants of show and decorative Pelargoniums which were rooted during the summer should now be ready for potting into 5-inch pots. The compost may consist of two-thirds sandy loam, and the remainder of leaf-soil and dried cow-manure, with sufficient sharp sand to keep the soil open. Pot moderately firmly in well-crooked pots, and place the plants in a pit where sufficient fire-heat can be applied to exclude frost. When the roots have penetrated the new soil, ventilation must be freely given to keep the plants hard and stocky. Old plants which were recently potted will also require free ventilation with the same object in view.

Carnations.—The Tree Carnations will now be flowering freely, and should receive careful attention with regard to tying and watering. Prick up the surface of the soil and apply frequent light dressings of artificial manure previous to watering with clear soft water. Ventilate the house freely in order to produce good, healthy growth. Sufficient fire-heat ought to be applied to keep the night temperature at 50°.

Chrysanthemums.—Many of the large-flowering varieties are opening, and will require a good deal of attention to obtain the best results. Keep the atmosphere of the house moderately dry and ventilate freely when the weather permits. If foggy weather sets in, a little fire-heat may be applied to keep the air dry. All late-flowering varieties should be given a liberal supply of stimulants to plump up the buds. Ventilate the house freely and only apply fire-heat to exclude frost.

The Flower Garden.

Dahlia Tubers, Gladioli, Salvia patens and tuberous Begonias should all be lifted from the flower garden and placed in some dry, frost-proof shed for the winter. The Salvia roots are best placed in boxes of dry sand. Cut the stems to within 6 inches of the ground before the plants are lifted.

Roses.—If new plantations of Roses are contemplated, there is no better time than the month of November to accomplish the work. The ground for the purpose should be trenched as soon as possible, and a good dressing of farmyard manure applied. The beds may then be left to settle before planting takes place.

Sweet Peas in Pots.—The present is a good time to sow Sweet Peas in pots for planting in the open garden during the spring. Three or four seeds will be sufficient for each pot, and when the plants are through the surface they should be placed quite close to the glass in a cool pit and freely ventilated during suitable weather. In favourable districts the seeds may be sown

in the open, but a warm south border should be chosen for them, and great care will be necessary to protect them from slugs and mice.

The Rock Garden.—Any alterations which are contemplated in the rock garden should be accomplished as soon as possible, and any plants which have been propagated during the summer and are considered quite hardy may be placed in position at once, leaving the most tender subjects under a hand-light or cold frame until the spring. If dry weather continues, many of the plants in exposed positions will require water. Fallen leaves and decaying matter of all kinds should be removed, or some of the most tender plants may be lost in consequence. Keep the surroundings quite free from weeds by the frequent use of a small hoe.

The Kitchen Garden.

Asparagus-Beds.—As soon as the growths are sufficiently ripe, they should be cut to within a few inches of the ground and burned. The surface of the beds may then be lightly pricked over in readiness for a dressing of farmyard manure, which should be allowed to remain on for the winter.

Cabbage.—A second plantation of Cabbage should be made now to provide supplies for use in April and May. If sharp weather prevails during the winter, this may prove a more serviceable crop than the earliest plantation.

Winter Salad.—To ensure a full supply of salad during the winter, all empty frames must be filled at once with plants of Lettuce and Endive, which should be carefully lifted from the open garden. A thorough soaking of water ought to be given several hours before the plants are lifted, and again after they are placed in the frames. If box frames are available, they may be placed over salad plants growing in the open. Chicory may also be lifted and placed in some dark chamber with sufficient heat to start the roots into growth. If only a small supply is necessary, the roots may be potted and covered with an inverted pot of the same size, which may also be covered with leaves in order to ensure complete darkness. Mustard and Cress should be sown weekly in quantities according to demand.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Runner Beans.—Now that the supply of Beans as a green vegetable will be finished, so far at least as outside plants are concerned, the plants should be gone over, gathering all pods that have been allowed to mature. Where economy has to be practised, a number of the best of these should be saved for seed purposes. These must be stored where they will dry slowly. The seeds should be taken from the other pods and cooked; they make a most delicious dish.

Horseradish.—As the weather becomes colder the demand for Horseradish increases, and instead of digging a root here and there, as is usually done, it would be better to dig up a few rows, if not the entire plantation, and store the roots in sand where they can easily be got at when wanted. It will be advisable to grade the roots, selecting the largest for the season's demand; while the secondary roots should be stored separately for spring planting, much after the style of treating Seakale.

Asparagus.—It may seem early in the season to think about the forcing of this excellent vegetable, but as the craze of the day is for variety and things out of season, it is none too early to consider the forcing of Asparagus. Treated on proper lines it is doubtful if we realise how accommodating this vegetable is for forcing purposes. Assuming that the crowns are thoroughly matured, a few may be lifted at any time after this date and placed in boxes in any heated structure and heavily shaded. It is surprising how soon a sufficient quantity for a nice dish can be cut. It should be remembered that Asparagus roots suffer very much if exposed to the air for any length of time, so that the sooner they are planted after being lifted the better.

The Flower Garden.

Planting Roses.—Although these may be planted more or less successfully from now till the beginning of March, there is no doubt that the earlier they are planted the better the results.

Herbaceous Plants.—Most of these will now have passed out of flower, and a careful note should be made of those that need to be replanted. Unless the border has been regularly top-dressed, these plants soon become exhausted, and consequently the growths become weak and the flowers small. Where it is not possible to replant the entire border, much can be done by reducing the stronger-growing plants that are encroaching on the others and cutting away all dead stems. As has frequently been pointed out, the choicer subjects had better not be disturbed till the spring. All plants should, if possible, be correctly named, and as wooden labels rarely last more than two seasons, these ought to be renewed as occasion requires.

Plants Under Glass.

Schizanthuses.—Those plants that are intended to make large specimens should now be put into their flowering pots, and as these plants are rather free-growing, the compost should contain some good loam, with the addition of some artificial manure. After potting, the plants ought to be placed in a cool house not far from the glass, and for a time little or no water will be required.

Primulas.—The majority of these, whether of the obconica or sinensis type, should now be placed in a house where the temperature can be maintained at about 50°. The earliest of these will now be well established in their flowering pots, and may be given some weak liquid manure. Plants intended for flowering later should be potted on and placed near the glass. As Primulas suffer from damping, the atmosphere must be kept fairly dry.

Humea elegans.—These are possibly the most fastidious plants in the greenhouse to bring safely through the winter. No matter how strong and healthy the plants may seem, the slightest neglect in watering will most assuredly tell against them. Therefore it will be necessary to keep a watchful eye on them during the next three months, and, as has already been pointed out, use the water-pot with caution.

The Hardy Fruit Garden.

Morello Cherries.—The pruning and cleansing of these trees ought to be proceeded with at once, in order that a great part of this work may be completed before very severe weather sets in. Where the trees have been infested with spider or other vermin, they should be entirely taken down and treated in the same way as Peaches. In pruning, all shoots that have borne fruit ought to be cut away, thinning out the others to not less than 4 inches apart. Unhealthy trees should have a little of the soil removed round the stem, replacing this with some good loam and burnt clay.

Loganberries.—The last of the fruit will now have been gathered, and unless the young growths were thinned out during the growing season, the result will be a perfect tangle. These should be thinned out at once to give the remaining shoots a chance of ripening before severe weather sets in.

Fruit Under Glass.

Peaches.—A start should now be made with the pruning and training of the earliest varieties. If the trees were disbudded properly during the summer, very little pruning ought to be necessary now. Assuming that the house and trees have been washed, as I have frequently pointed out, the trees should be tied up. In doing so, endeavour as far as possible to have them well balanced, and for this purpose do not hesitate to cut away all strong-growing growths that would be likely to run away from the others.

Strawberries.—Plants intended for forcing will by this time have filled the pots with roots, so that careful watering will be necessary, especially on fine days. If these are allowed to become dry once or twice, it almost spells ruin. On the appearance of hard frost the pots should be plunged up to the rims in ashes, when the plants can be taken in to force as required.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

BULBS FOR PRESENT PLANTING.

DURING the past few weeks nearly every post has brought us catalogues of "Bulbs for Autumn Planting," lists that remind us only too vividly that summer has flown and that the dreary days of winter will soon be upon us. Unfortunately for our gardens, and incidentally for the bulb merchants, these catalogues are, in the enjoyment of our summer flowers, too often put aside till a later date, or it may be they are entirely forgotten until a clearing-out of sundry useless material in the spring brings them to light, when it is, alas! too late to plant the many bulbous flowers without which our spring gardens would lose a great deal of their charm. The distribution of bulb catalogues during September is not, as many would suppose, due to any ulterior motives on the part of the bulb merchant; he is not trying to steal a march on his competitors, but he knows only too well that if we would get the very best from the goods he offers, they ought to be planted as early as possible after this date. It does not, of course, necessarily follow that they will be entire failures if not planted until considerably later; but there is everything to be gained by consigning these dried-looking roots to Mother Earth as early as possible in the autumn.

Where such bulbs as Daffodils, Hyacinths and Tulips are used for bedding, it may be impossible to plant them yet; the beds are still, owing to the mild weather, resplendent in their summer array, but, frost or no frost, they must soon be cleared. In the meantime there is a large host of smaller and lesser-known bulbs that may very well be planted without disturbing other kinds of flowers, and it is to these that I would call particular attention. The majority are specially suited for planting towards the front of a shrubbery, in beds of deciduous shrubs, in rock garden nooks, or, indeed, in almost any position where flowers of lowly stature will be appreciated during the early days of the year.

Undoubtedly one of the most pleasing, and the earliest of all to flower, is the so-called Winter Aconite (*Eranthis hyemalis*). Before January is far advanced the Buttercup-like flowers, each with its frilled green ruff, are studing the greensward of our lawns or carpeting the shrub-beds, reminding us that winter at last is fleeting and that Nature is slowly but surely awakening. But this little flower must be planted early, and planted in colonies. It thrives well almost anywhere, and is particularly pleasing in grass. Close upon it come the Snowdrops, the glistening white flowers of which are loved by everyone. Like the Winter Aconite, they thrive almost anywhere, but for naturalising in grass the common one, *Galanthus nivalis*, should be chosen. For rock garden nooks or shrub-beds the larger-flowered *G. Elwesii* may be planted freely. There are a number of other and choicer kinds, but for all ordinary purposes these two Snowdrops will suffice. Almost at the same time the beautiful little early Squills commence to open their dainty blue flowers. First comes the Two-leaved Squill (*Scilla bifolia*), to be followed by its near relatives the Chionodoxas, the best known of which is the charming little Glory of the Snow (*C. Luciliæ*), and subsequently by the rich blue *Scilla sibirica*. We cannot well have too many of these early flowering Squills

and Chionodoxas in our gardens, and as the bulbs are cheap, they may well be planted with a lavish hand. In addition to those already named, mention must be made of *Chionodoxa sardensis*, the gem of the whole family and one that flowers very early. In common with the other species it seeds freely, and will multiply rapidly if left well alone.

Then what shall we say of the dwarf Wind-flowers such as *Anemone apennina* and *A. blanda*? Both have delightful blue flowers, and I never could make up my mind which I liked best. So often the failure to grow these successfully is attributed to various mundane causes, when it is the date of planting that is at fault. The curious little tubers become badly shrivelled if left out of the ground long, and their stamina is thereby considerably diminished. Plant them freely and early in well-drained but not over-dry soil, and subsequently leave them well alone. They will thrive in grass or under the shade of deciduous trees, while colonies of them in the rock garden produce an effect in April of which few other plants are capable. Then there is our wild *Anemone* (*A. nemorosa*), with its dainty white flowers, and also Robinson's variety of the same, with pale blue blossoms. Both ought to find a place in our gardens, especially in woodland glens, where they are perfectly in keeping with the surroundings.

The Crocus family gives us a wealth of flowers from late autumn right on until spring is well under way, and it is necessary to get the corms of all kinds planted as early as possible. A dainty little plant that I have grown for some years, but which I seldom find in other gardens, is the Lebanon Squill (*Puschkinia libanotica*), sometimes catalogued as *P. scilloides compacta*. The flowers are white, striped soft blue, and, though small, remind one of a piece of old, rare china. Then there are the Muscaris, or Grape, Starch or Feather Hyacinths, the gem of which is Heavenly Blue, though there are several others, notably azureum and conicum, that are well worth growing. A careful perusal of a bulb catalogue will reveal other comparatively little-known bulbous plants that ought to find a home in our gardens; but they must be planted at once and, in the majority of cases, lavishly. Isolated Snowdrops and Crocuses, for instance, lose their charm.

S. X.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ST. BRIGID ANEMONES (H. C. E.).—In ordinary circumstances the better way would be, if the seedlings have only recently vegetated, to retain them in the boxes, give them cold frame protection for the winter, and plant them out in March next or when all fear of severe frosts has passed. On the other hand, if you have to deal with a light, well-drained soil and a sheltered situation, the young plants may be put out at once. Some of the

leaves may be cut by severe frost, though, if you plant the tubers in drills 2 inches deep, the latter would be safe enough. When sowing seeds of these *Anemones*, it is advisable to sow in drills in the open ground in light soil, and, in the event of very severe weather, to protect with litter for the first season. When the tubers are large enough, they may be planted at a sufficient depth—4 inches to 5 inches—to be out of the way of frost. Generally speaking, however, the tubers are hardy.

IRIS OCHROLEUCA (Whyke).—This species is most erratic in its behaviour, and varies considerably in different districts and soils of a most opposite character. We have, indeed, grown and flowered it quite well in moist, as also singularly dry soils, the latter, however, always well enriched by manure. One thing is certain—it is impatient of removal, and it requires also to be fairly well established before it flowers at all. The root decay points to insect pests, and the roots and soil should be examined for insects of the millipede tribe. If these are present in any number, it is highly probable that they have been boring the rhizomes, the large, fleshy roots of which the plant is composed. Should such exist, your best remedy would be trapping with Potatoes cut in halves or slices and buried an inch or so in the soil, marking their positions so that they may be examined at will. In good health the plant remains green many weeks after flowering. This year, however, the exceptional heat and drought has militated against longevity. If this reply does not meet the case, perhaps you could send a root for our inspection.

THE GREENHOUSE.

CHRYSANTHEMUMS MILDEWED (W. R.).—Your Chrysanthemums appear to be attacked by mildew, and we recommend spraying every week with a solution of an ounce of potassium sulphide in three gallons of water. It is unwise to use the solution stronger than this, as there is some danger of damage to the foliage otherwise.

HEATING SMALL GREENHOUSE (W. H.).—There is no doubt that for a small greenhouse such as that named by you an oil lamp, or, rather, stove, would prove satisfactory. The main point is that it be kept perfectly clean and the house ventilated whenever possible. The best oil, too, must be used. There are various appliances for the purpose, in which a few pipes that do not need any fitting are disposed after the fashion of a radiator, and are heated by a lamp.

TO FLOWER DENDROBIUM FIMBRIATUM (L. F. B.).—*Dendrobium fimbriatum* is always very shy in flowering. The only way to induce it to bloom in a satisfactory manner is, after making its new growth, to keep it as dry as possible and a little cooler in order to give it a period of rest. After this, when returned to its former situation, it should then bloom from the last bulb (not the new one), while it will sometimes flower from very old bulbs, as *D. dalhousianum* does, usually about the month of July.

ROSE GARDEN.

ASHES AS PROTECTION FOR ROSES (J. C. S.).—The ashes obtained by burning garden refuse would answer for protecting Rose bushes during the winter, but coal-ashes or burnt earth, owing to their greater porosity, would be better. Ashes from garden refuse are excellent manure, being rich in potash. The ordinary soil, unless very heavy clay, if drawn up over the stems of the Roses in the form of a mound, makes a good protection.

ROSES FAILING (L.).—Black spot appears to be a disease that when once established becomes difficult to eradicate. We advise you to replant your Roses this autumn after we have had a good rain, and in renewing the beds give a good dressing of basic slag to the lower soil at the rate of 6oz. to the square yard. Have the surface 2 inches or 3 inches of soil removed and burnt, as the spores of the black spot are sure to be present there. Any healthy-looking plants—that is, those whose roots are sound—could be cut back hard and replanted, and the sickly plants replaced with good English-grown bushes grown in exposed fields. The Lyon Rose is badly addicted to black spot, but we should not have expected it upon Mme. Ravary and Mme. A. Chatenay. Certainly Prince de Bulgarie would be superior in growth to Lyon Rose. We can recommend Cissie Easlea as one free from any disease, and it produces such glistening foliage that enables it to withstand these fungoid attacks.

FRUIT GARDEN.

MUSCAT GRAPES SHRIVELLING (Barrington).—Your Muscats are suffering from shanking, and also the Black Hamburgh in a lesser degree. See reply to "Gloucestershire."

PEACH STONES SPLITTING (W. P.).—Lime the soil in which the Peaches are growing. The trees are probably affected with gumming, and it would be well to cut out all the gummed branches and paint the wounds with white paint or with coal tar.

PEACH SHOOTS DISEASED (M. B. R.).—The shoots of the Peach sent appear to be attacked by the Rose mildew, *Sphaerotheca pannosa*. We recommend you to prune away, as far as possible, all those shoots which show the mildew, and to spray the tree thoroughly, while it is dormant, with a solution of copper sulphate, 1lb. in 30 to 35 gallons of water. See that the tree next year is not allowed to suffer from want of water, for that is the main cause, checking it and laying it open to attacks of such fungi as the mildew.

PEARS CRACKING (Down Place).—The Pears are attacked by the disease known as Pear scab. This is due to a fungus called *Fusicladium pyrinum*, which attacks not only the fruit, but the foliage and shoots as well. Your best plan would be to prune out all the shoots that show signs of cracking of the bark (as though they had been injured by frost) and to spray the tree in the winter with copper sulphate at the rate of a pound to twenty-five gallons of water, and afterwards, just before the buds burst and again when the petals have fallen, with Bordeaux mixture at half strength.

APPLE-DISEASED (E. B.).—The Apple is attacked by the fungus *Sclerotinia fructigena*, causing the disease known as brown rot. The fungus attacks the shoots and foliage, as well as the flowers and fruits, though it is more easily seen on the last. Care should be taken to prune out the diseased parts of the tree during the winter. All Apples hanging on the tree should be removed, and the tree sprayed during the winter with a solution of a pound of copper sulphate in twenty-five gallons of water. Spray with Bordeaux mixture just before the buds burst and again after the flowers have fallen.

PEACH ATTACKED BY FUNGUS (E. C.).—Part of the trouble with the Peach is due to shot-hole fungus, part to spraying with an unsuitable compound. Potassium sulphide often causes defoliation of delicate-foliaged plants like Peaches and Nectarines, and we recommend in place of it for these plants ammoniacal copper carbonate in a little water, adding three pints of the strongest ammonia and diluting to forty-five gallons with soft water. We have found this very effective in controlling shot-hole fungus, and it may be used without detriment to the plants sprayed, so long as the spraying is done in dull weather or after dusk.

GRAPE SUPPOSED TO BE BLACK HAMBURGH (H. S.).—The berries were rather badly decayed before reaching us. The variety is certainly not Black Hamburgh, and we agree with you in thinking it is Madresfield Court, and an excellent variety also. The cause of failure in growth is an attack by a miniature species of red spider on the leading shoot of the Vine. It is not at all unusual for this spider to attack the shoots of vigorous young Vines in this way. The only cure is to sponge the parts carefully with a mixture of sulphur and soft soap and water. Mix together half a pint of sulphur with a quarter of a pint of soft soap in warm water, bringing them down to the consistency of thick paint; then add to this half a gallon of water, well mixing together. Sponge the affected parts several times with this mixture until you are satisfied the Vine is clean. Examine the Vine several times for its reappearance, and apply again if necessary.

GRAPES SHANKING (Gloucestershire).—The sample of Grapes sent shows that the Vines are suffering from a disease termed in garden parlance "shanking." This disease is brought about by various causes, all tending to weaken the Vine during its growth of the previous year. It may be the Vine was cropped too heavily the year before, overtaxing its strength. This would bring it about, or it may be that the Vine last year suffered from a severe attack of red spider; or a too heavy application of artificial manure to the roots, causing the destruction of some of them, might be the cause. Cut away and burn all the diseased berries. As soon as the foliage is ripe and has dropped, clear away the top soil of the border until you come to a good mass of roots, and then apply a top-dressing 5 inches deep (after well treading down) of the following soil compost: To a cartload of airy fibrous loam, cut into lumps the size of a quarter of a brick, add three barrow-loads of old mortar rubble, a bushel of quarter-inch bones and the same of bone-meal, also a barrow-load of fresh lime. Mix well together and apply as soon as the roots are exposed. As soon as this top-dressing is laid on the roots, have it covered over to the depth of 12 inches with freshly fallen leaves, these to remain on the border until the first week in April. Crop the affected Vines very lightly next year, and you will find, we think, they will be quite recovered by the following year.

KITCHEN GARDEN.

POTATOES WITH BLACK MARKS (G. A.).—Potatoes not infrequently develop these hollow, black-lined spaces inside when they are allowed to become hot in a store. It may be that they have been put away without drying, or possibly stored in too hot a place. There is also a bacterial disease that attacks Potatoes somewhat in this way, but the symptoms are not quite the same. The tubers certainly do not look nice, but if halved and the black part removed before cooking, it would render them fit for consumption.

BRUSSELS SPROUTS DISEASED (W. T.).—Your Brussels Sprouts are attacked by the disease called club-root, due to the fungus *Plasmodiophora brassicae*. This is best combated by treating the soil with quicklime at the rate of half a bushel to the square rod or rather more, purchasing it in the powder form and spreading it over the ground evenly, digging it in immediately. You will find a short article on this subject on another page.

CATERPILLARS ON BROCCOLI AND SPINACH (B. G.).—The caterpillar sent is that of one of the Cabbage moths or an allied species, and from its habit of feeding on or near the surface and hiding in the soil during the daytime it has earned the name of surface caterpillar. Hand-picking is certainly the most satisfactory way of dealing with the pest, and the only one that can be recommended in many cases. Where plants are not to be used for food, spraying with lead arsenate is the best thing to do.

In some cases success can be obtained by dipping Clover, or something else of which the caterpillar is fond, in Paris green and putting the small heaps near their haunts.

CATERPILLARS ON CABBAGES (W. F. S. H.).—You might try the effect of spraying the Cabbages with water at about 120° or even a little hotter, or with salt water. Either of them would probably reduce the trouble considerably. Phormium tenax often flowers in suitable localities when the plants have attained some size, and not infrequently the seed ripens. We expect you will find flowers in most seasons after this.

MISCELLANEOUS.

VARIOUS QUESTIONS (Berkshire).—Is not the brown appearance of the young fronds of the Maidenhair normal? We do not think anything is wrong with them. The liquid manure may be used when insects are in it and a smell arising from it. It will be rather difficult to prevent flies from breeding in the manure water, but possibly a thin film of paraffin maintained on its surface would effect the purpose.

BOTTLING FRUIT (M. H.).—If the Plums are quite covered with water and no air is allowed to come in contact, the fruit certainly ought not to be discoloured. Before serving up the fruit it will require a certain amount of cooking, but much will depend on the variety and the state of the fruit as to ripeness when bottled. Sugar sufficient to sweeten should then be added. As is well known, sugar can be added at the time of bottling if thought desirable.

GAS-LIME FOR BREAKING UP LAND (S. H. G.).—Gas-lime can rarely be obtained nowadays. We think your best plan would be to get some quicklime (burnt lime or stone lime) and put it in heaps on the ground at the rate of half a bushel to the square rod; cover it with earth, and when it is slaked (in about a fortnight or three weeks), spread it and dig it in this autumn. The weeds and grass should be completely buried, and Twitch, Bellbine and the like removed.

NAMES OF PLANTS.—*A. L. Ford.*—The Belladonna Lily (*Amaryllis Belladonna*).—*Mrs. Logan.*—*Saxifraga sarmentosa*, often known as Mother of Thousands.—*F. K.*—1, *Aster cordifolius*; 2, *A. diffusus*; 3, *A. Novi-Belgii*; 4, *A. N.-B. densus*; 5, *A. Novae-Angliae* Mrs. Raynor; 6, a seedling of *Aster vimineus*.—*H. R. D. M.*—*Crataegus Crus-galli* (Cockspur Thorn).—*Mercury.*—*Polygonum polystachyum.*—*West Sussex.*—*Chrysanthemum* (*Pyrethrum*) Mrs. F. Sander.—*J. G. H.*—*Zauschneria californica* (Californian Fuchsia).

NAMES OF FRUIT.—*T. S. B.*—Pear Pitmaston Duchess.—*A. T. Underhill.*—1, Marie Guise; 2, Stamford Pippin; 3, Cobham; 4, Scarlet Nonpareil; 5, Ribston Pippin; 6, Gascoyne's Scarlet; 7, Catillac; 8, Sandringham; 9, Ecklinville Seedling; 10, Durondeau; 11, Bismarck; 12, Peasgood's Nonsuch; 13, Prince Edward; 14, Cox's Pomona; 15, Pitmaston Duchess.—*G. Tolson.*—1, Sops o' Wine; 2, Annie Elizabeth; 3, Beauty of Hants; 4, Northern Greening; 5, Fearn's Pippin; 6, New Hawthornden; 7, Christmas Pearmain; 8, Tom Putt; 9, Cat's-head; 10, Hoary Morning.—*Adam Scott.*—1, Cox's Orange Pippin; 2, Allington Pippin; 4, Fearn's Pippin; 5, King of the Pippins.—*W. E. C.*—1, Cissy Apple; 2, Mère du Ménage; 4, Ribston Pippin; 5, Cox's Orange Pippin; 6, King of the Pippins.—*H. R. D. M.*—1, Malformed fruit, too poor to name; 2, Bismarck; 3, Lady Henniker; 4, Yellow Ingestre; 5, Rosemary Russet; 6, Duchesse d'Angoulême; 7, Baronne de Mells; 8, probably a small fruit of Pitmaston Duchess.—*J. H. Welch.*—Mère du Ménage.—*C. J. Nicholson.*—1, American Mother; 2, Cox's Orange Pippin; 3, Bowhill Pippin.—*F. G. E.*—1, Too poor to name; 2, Ross Nonpareil; 3, Pigeon Apple; 4, Mank's Codlin; 5, Hall Door; 6, Northern Greening; 7, Ribston Pippin; Pear Marie Louise.—*Herbert Barnes.*—1, Christmas Pearmain; 2, Hawthornden; 3, Souvenir du Congrès; 4, Louise Bonne de Jersey; 5, Beurré Hardy; 6, Beurré Diel.—*J. K., Ireland.*—1, Decayed when received; 2, too decayed to name; 3, Bismarck; 4, Malster; 5, Blenheim Orange; 6, Lord Derby; 7, Braddick's Nonpareil; 8, too decayed to identify; 9, Warner's King; 10, Cobham.—*Torquay.*—Cox's Pomona.

THE EDITOR'S TABLE.

Two Beautiful Michaelmas Daisies.—Messrs. T. S. Ware, Limited, of Feltham send flowers of two new Michaelmas Daisies, both of which are superb. The most charming of the twain is *Aster Amellus Arethusa*, a dwarf and freely branched plant with very large, deep rose-coloured blossoms. This received an award of merit from the Royal Horticultural Society a few weeks ago. The other is also a variety of *Amellus*, and is named *Orion*. This has the same habit and large flowers as *Arethusa*, but the blossoms are rich blue in colour. We welcome these as charming additions to the hardy border flowers of late autumn, and feel sure that before long they will be found in nearly every garden in the United Kingdom.

SOCIETIES.

NATIONAL SWEET PEA SOCIETY. ANNUAL GENERAL MEETING.

THIS was held at the Westminster Palace Hotel, London, S.W., on Monday, October 12, Mr. F. W. Harvey in the chair. The secretary, Mr. Henry D. Tigwell, read the notice convening the meeting, and the minutes of the last annual general meeting and of the special general meeting (held in April, 1914), which were approved and signed. It was agreed that the annual report be taken as read. The chairman, in moving its adoption, said that the war had had rather a bad effect on the membership of the society. During the year 145 new members had joined and 72 had resigned, but 50 of those resignations had been received since the war broke out, and there was no doubt that that was mainly the cause of those resignations. New societies to the number of twenty-two had been affiliated, which was double the number of last year, eight had resigned, while a few had not yet paid their subscriptions for 1914. The committee had fully considered the advisability of holding trials next year, and had decided that it was the duty of the society to try to keep things going as well as possible. They had come to the conclusion that Mr. Christy of Roxwell, near Chelmsford, who was willing to undertake the trials, would be the suitable man. He had had considerable experience in the cultivation of Sweet Peas. Major Hurst was unable to undertake the trials next year. In regard to finance, it would be seen that the financial year had not been a very good one for the society. They had had a large number of items to meet, which had been rather extraordinary, if he might say so. To start with, the balance brought forward from last year was about £30 less than in the previous year. In addition to that there were outstanding accounts which had not been rendered at the date when the previous financial year closed, amounting to £37. Those had been paid, of course, out of the current year's accounts. Then it would be remembered that last year Mr. Curtis, their hon. secretary, was compelled to resign the secretaryship, and Mr. Tigwell was elected as a paid secretary with a salary of £50 a year. The committee thought it was quite right and proper to pay Mr. Tigwell his salary every quarter, so that they had had to meet this year the secretarial work of nearly two years. It would be recollected that at the last annual meeting £73 10s. was voted as an honorarium to the late hon. secretary, and in addition to paying that, this year they had paid Mr. Tigwell three quarters' salary, the total amounting to £111. Next year there would only be Mr. Tigwell's salary to pay—one year's salary. Trials expenses this year amounted to £64 5s. 10d., as against £49 10s. 2d. in 1913, which was mainly due to the fact that the seeds were sown in the autumn, this entailing considerable expense. Tenders had been obtained for printing the "Annual" and trials list next year, and a considerable saving would be effected in that direction. It would be seen that there were outstanding accounts with the printers amounting to about £180. This amount the committee proposed to pay with the balance in hand and £150 from the deposit account. That would still leave £50 on deposit. Arrangements had been made to hold the London show on Tuesday, July 13, 1915, that being the only date in July when the committee could obtain the Royal Horticultural Society's Hall. Owing to the war the committee had decided not to incur the expense of a provincial show next year. In conclusion, the chairman proposed that the report and financial statement be adopted. Mr. J. S. Brunton seconded the motion. The report and accounts were unanimously adopted. Votes of thanks to the president, hon. treasurer, Major C. C. Hurst, chairman of committee, and the floral and general committee were proposed, seconded and passed.

Several proposed alterations, additions or amendments to the rules had been sent in, but only two of these were carried. One, a new rule, is as follows: "The committee shall have power to refuse membership to any person." Rule 22 will in future include the words "not more than three varieties" in place of "three varieties."

Miss H. C. Philbrick was unanimously elected president for the ensuing year; Mr. E. H. Christy, chairman of committee; Mr. Reginald Christy, trials superintendent; Mr. E. Sherwood, hon. treasurer; Mr. R. Gluyas, auditor; and Mr. H. D. Tigwell, secretary. The general committee were re-elected with the exception of Mr. Bide, who was not eligible, and the addition of Messrs. T. A. Weston, E. R. Janes, F. W. Harvey and B. Peyman. Mr. H. A. Reekie was added to the list of provincial corresponding members of committee. Balloting for the floral committee resulted in the following being elected: Messrs. R. Bolton, J. M. Bridgeford, C. H. Curtis, A. Hallam, G. Herbert, A. Ireland, T. Jones, H. Smith and T. Stevenson.

READING GARDENERS' ASSOCIATION.

THE second fortnightly meeting of the session was held in the Education Class Room at the College on the 5th inst. The president occupied the chair, and there was a good attendance. The subject for the evening, "How to Keep Mixed Borders Gay from Spring to Autumn," was ably introduced by Mr. H. C. Loader of The Gardens, Ebleigh Park, Reading. The lecturer lucidly explained the method he employs to keep the borders gay at Ebleigh Park with perennials, biennials, annuals and bulbs. Mr. Loader advocated that the borders should be deeply dug and heavily manured, and such perennials planted as Michaelmas Daisies, *Solidago*, *Helenium* in variety, early flowering *Chrysanthemums*, herbaceous *Phloxes*, *Pyrethrums*, *Polyanthuses* and *Dahlias*. The biennials

recommended for planting between the perennials were Canterbury Bells in mauve, white and pink, and Sweet Williams (Pink Beauty); and among annuals Asters (Giant Single and Southcote Beauty), Cosmea, Sutton's New Red Sunflower and Silene (Dwarf Pink). May-flowering Tulips and Daffodils are also freely planted. The successful mode of cultivation, to ensure the borders looking constantly gay and enabling one to cut a bunch of flowers at any time, was dealt with. The animated discussion which took place after the paper had been read showed how much the subject had been appreciated, and a hearty vote of thanks was accorded Mr. Loader for his instructive paper. Exhibits were numerous, and considerably occupied the time of the judges. In the points competition, Class I., Mr. Blackwell received 9½ for Apples, Mr. Goodger 9½ for Pears, Mr. Tovey 9 for Pears, and Mr. Townsend 10 for Pears. In Class II., Mr. F. Haines received 11½ points for vegetables. The *Onlooker* prizes, for three dishes of vegetables, for single-handed gardeners only, were awarded as follows: First, 6s., Mr. F. Haines, gardener to Mr. J. F. Hawkins; second, 3s. 6d., Mr. F. Lamport, gardener to Mr. J. Blandy. Mr. C. J. Howlett was awarded a certificate for a collection of Potatoes and fruit. Non-competitive exhibits were staged by Mr. J. T. Tubb (Peaches), Mr. Wilson (Pears) and Mr. Loader (Asters).

SCOTTISH HORTICULTURAL ASSOCIATION.

THE usual monthly meeting of the above association was held in the hall, 5, St. Andrew Square, Edinburgh, on the evening of October 6. Mr. David King, Osborne Nurseries (the president), occupied the chair, and there was a good attendance. The exhibits were excellent, and included the following: Collection of excellent vegetables from the lecturer of the evening, Mr. D. M. Welsh, The Gardens, Spean Lodge, Spean Bridge; a splendid exhibit of about sixty varieties of early Chrysanthemums of the different sections and Antirrhinum *Nelrose*, sent by Messrs. Dobbie and Co., Edinburgh; a comprehensive exhibit of splendid Apples from Mr. W. G. Pirie, The Gardens, Dalhousie Castle, Bonnyrigg; Chrysanthemums and about eighteen varieties of Potatoes from Miss Burton, Polton; dried Potatoes, &c., from Mr. G. P. Berry of the Board of Agriculture, London; and flowers of *Cobæa scandens* (grown in the open) from Mr. Charles Comfort, The Gardens, Broomfields, Davidson's Mains. In the absence of Mr. Welsh, the lecturer of the evening, his paper was read by the secretary. It was entitled "Vegetables for the Western Highlands," and was a valuable contribution on the subject, dealing fully with the conditions existing in this rather difficult district and detailing the best varieties. As was indicated in the paper, the weather conditions are troublesome, as at Spean Bridge the average rainfall was 67 inches. Mr. Welsh stated that about four months covered the period of growth for the vegetables. The lecturer also gave figures to show the range of temperatures, and recounted the difficulties experienced under such conditions.

SCOTTISH TRIAL OF GARDEN DAHLIAS.

FOLLOWING upon the great trial of Dahlias held during the season of 1913 by Mr. Reginald Cory at Duffryn, Cardiff, it was decided last spring to conduct a trial on somewhat similar lines in Scotland, so as to ascertain whether the results obtained at Cardiff would be maintained in the North. The National Dahlia Society accepted the offer of Mr. Robert Fife of Messrs. Dobbie and Co., Edinburgh, to conduct the trial in the firm's grounds there. The varieties under trial were, as far as possible, the same as those grown at Cardiff in 1913, and each variety was represented by two plants.

Those who contributed to the Scottish trial, and who sent all plants free of charge, were Messrs. R. H. Bath, Limited, Wisbech; Messrs. J. Cheal and Sons, Crawley; Mr. J. A. Jarrett, Anerley (an amateur); Mr. S. Mortimer, Farnham; Mr. J. B. Riding, Chingford; Messrs. W. Treseder, Limited, Cardiff; Mr. Charles Turner, Slough; Messrs. T. S. Ware, Limited, Feltham; Mr. J. T. West, Brentwood; and Messrs. Dobbie and Co., Edinburgh. With three exceptions the plants were sent in quite early in the season, and were grown into large plants before the planting-out time arrived. The varieties on trial numbered 458 (in addition to many seedlings), grouped as follows: Cactus, 113; bedding Cactus, 11; *Pæony*-flowered, 124; Pompons, 42; decorative, 45; *Collarette*, 103; show and fancy, 47; singles, 36; with some other sections represented by fewer varieties. The plants, on the whole, made very satisfactory growth, and, as a rule, were in full flower at the time of inspection. The moist and warm weather, however, had forced them into new growth, which more or less hid the flowers in the case of some varieties of well-known decorative value.

The inspection took place on Monday, September 14, and the following gentlemen were appointed to make the awards from a garden decorative point of view: Mr. J. E. McHattie, Superintendent of Parks, Edinburgh; Mr. J. Whitton, Superintendent of Parks, Glasgow; Mr. Matthew Campbell, nurseryman, Blantyre; Mr. John Smellie, nurseryman, Busby; Mr. D. Kidd, gardener to Lord Elphinstone, Carberry Towers, Musselburgh; and Mr. J. Highgate, gardener to the Marquis of Linlithgow, Hopetoun House, South Queensferry. The following varieties were granted three marks, which indicate the highest quality for garden decoration:

Collarette Dahlias.—Anerley Gem, Annan, Carl Bechstadt, Deveron, Doon, Esk, Fascination, Forth, Henri Farman, Holyrood, Inchmarnock, Lugar, Leader, Liffey, Monach, Nethan, Ouse, Parrot, Purity, Queen Bess, Queen Mary, St. Abbs, Skerryvore, Tay, Thames, Tweed and Tuskar.

Cactus Dahlias.—Amos Perry, Eclair, Firefly, Ivernina, Mrs. Freeman Thomas, Mrs. F. Grinstead, Mrs. F. Paton,

Mrs. J. Barker, Mrs. Landale, Nimrod, Salmon Queen, Star, Vivid, Vulcan and Westhall Scarlet.

Pæony-Flowered Dahlias.—A. Roosevelt, Codsall Gem, Europa, Gen. Botha, Germania, Hortulanus Budde, H. J. Lovinck, Kakadee, Liberty, Lord Milner, Mafeking, Mozart, Paul Kruger, Pretoria, Primrose Queen, Queen Wilhelmina, Reynolds, Salome, Sparkler, Splendour and Weber.

Pompon Dahlias.—Blush Gem, Crusoe, Daisy, Evelyn, Glow, Ideal, Ivy, Little Beeswing, Little Frank, Little Mary, Tommy Keith and Tommy Laing.

Single Dahlias.—Althea, Beacon, Cardinal, Grenadier, Mrs. W. Merry, Mr. E. D. Till, Mikado, Owen Thomas, Rosemary Bridge and Willie Fife.

Show Dahlias.—Duchess of York, Excellent, Prince Bismarck, Prince of Denmark and William Rawlings.

Decorative Dahlias.—Brentwood Yellow, Delice, Firefly, Jeanne Charmet, K. A. Victoria, Lorely, Loveliness, Mont Rose, Offenbach, Princess Juliana, Sulphurea and W. Goethe.

Other Sections.—Bedding varieties: Argos, Amanda, Barlow's Bedder, Charlotte, Gluckhauf and Marianne. Cosmea-flowered: Crawley Star. Mignon or Tom Thumb: Agnes, Jules Closson, Lancer and Pembroke. Anemone-flowered: Mons. Ch. Dupont.

TRIALS OF EARLY FLOWERING CHRYSANTHEMUMS.

IN addition to the extensive trial of early-flowering Chrysanthemums which is this year being conducted by the Royal Horticultural Society in their gardens at Wisley, Surrey, a very large trial of the same class of plants is being made by Messrs. Dobbie and Co. of Edinburgh. In addition to their own stock they have purchased from various sources all the varieties of early Chrysanthemums which they could secure. Many of the plants were somewhat small when received, and the planting, which was made in the early part of May, was irregular on this account.

These Chrysanthemums were all planted in batches of each colour, so that, when the adjudication was made, comparison would be much easier. As was to be expected, the growth of the different varieties was very irregular, ranging from about 1 foot to 4½ feet in height. The period of blooming, too, was quite as varied as the height of the plants. The first flowers appeared early in August, while the later varieties will not come into bloom until well on in the present month and on this account are not suitable for northern cultivation.

It was thought advisable to have the collection inspected about the middle of the season, and this took place on September 22, the following gentlemen acting on the adjudication committee: Messrs. W. H. Massie of Messrs. Dicksons and Co., Edinburgh; John Phillips, Granton Road Nurseries, Edinburgh; John Alexander, The Gardens, Niddrie, Craigmillar; and William Galloway, gardener to the Earl of Wemyss, Gosford, Longniddry. It may be added that the foregoing all occupy prominent positions in the Scottish Horticultural Association.

The varieties under trial were as follows: Japanese early-flowering, 190; but of these 62 were not in bloom at the date of inspection. Pompon varieties, 39; of these 10 were not in bloom at the date of inspection. Single varieties, 99; of these 9 were not in bloom at the date of inspection.

The following awards were made from the garden decorative point of view:

EARLY CHRYSANTHEMUMS.

Best white.—Artemis, Cranford White, Doris Peto, Tuckswood Early and White Countess. Second best white.—Auguste, Framfield Early White, Grosvenor, Hermine, La Neva, Market White and Pluie d'Argent. Best creamy white.—Cream Perrier and White Massé. Second best creamy white.—Perle Chatillonaise. Second best primrose.—Ethel. Best pale yellow.—John Bannister. Best deep yellow.—Carrie, Elstob Yellow, Horace Martin, Leslie, Champ d'Or, Maggie, Miss B. Melville, Orion and Polly. Second best deep yellow.—Curtis Martin. Best blush.—Cynthia, L'Yonne and Normandie. Second best blush.—Blush Beauty. Best rosy pink.—Lillie and Mme. C. Pereire. Second best rosy pink.—Calliope, Dolly Reeves, Dorothy Ashly, James Bateman and Mme. Marie Massé. Best rosy lilac.—Improved Massé. Best chestnut crimson.—Almitante and Mrs. Willis. Second best chestnut crimson.—George Bowness. Best crimson.—Crimson Diana, Crimson Polly, Goacher's Crimson, Kuroki and Mrs. W. Sydenham. Best crimson scarlet.—Wells' Scarlet. Best terra-cotta.—Abercorn Beauty, Orange, S. F. Richmond and Verona. Best bronze.—Bronze Goacher. Second best bronze.—Mrs. J. Fielding and Nina Blick. Best orange bronze.—Diana and Harrie.

POMPON EARLY CHRYSANTHEMUMS.

Second best white.—La Vièrge. Best yellow.—Craigmillar. Second best yellow.—Flora and Mignon. Second best bronze.—Mrs. E. Stacey. Second best pink.—J. B. Duboir. Best blush.—Mr. Selby. Best crimson.—Little Bob. Second best crimson.—Fred Pele and Toreador.

SINGLE EARLY CHRYSANTHEMUMS.

Best white.—Marion Bannister and White City. Second best white.—Walton Bradbury. Best yellow.—Ada Nice, Brightness and Joan Carter. Second best yellow.—The Moon. Best orange.—Wells' Pride. Second best bronze.—Eric. Second best salmon.—Canada. Second best terra-cotta.—Dr. Ingram and Holmthorpe. Second best blush.—Brazier's Beauty and Daisy Bell. Best pink.—John Woolman and Pink Gem. Second best pink.—Early rose. Best purple rose.—Dorothy. Second best crimson chestnut.—Alexander and A. J. Foster. Best crimson.—Dazzler. Second best crimson.—Kate Westlake, Merstham Glory and Ruby. Second best fiery red.—W. A. Cull.

NATIONAL DAHLIA SOCIETY.

ANNUAL CONFERENCE.

ON Thursday evening, the 15th inst., the above society held its annual conference at Carr's Restaurant, Strand, when Reginald Cory, Esq., occupied the chair. In the absence of the secretary, Mr. Charles H. Curtis ably fulfilled his duties. In opening the meeting, Mr. J. Cheal introduced the chairman, who expressed his pleasure at presiding, although it was mitigated by the recollection of the recent death of their chairman, the late Mr. George Gordon, a great friend of the society, and in whose death horticulture generally had lost a sympathetic leader. The members this year had experienced some disappointment, for the conference was originally intended to have been held at the White City. War trouble caused it to be removed to the Crystal Palace, then to the Royal Horticultural Society's Hall, and finally they found a refuge at Carr's, where he was glad to welcome them. He then called upon Mr. J. Stredwick to read the first paper, which was entitled "The History of the Dahlia."

Mr. Stredwick then related a few facts connected with the early history of the flower. There was practically nothing new or interesting in his communication, which consisted of a few historical facts admittedly drawn from the writings of the late Richard Dean. Then came a personal record of the reader's experience, chiefly in regard to the Cactus Dahlia and its progress. In the discussion that ensued Mr. Harman Payne pointed out that in 1889 the National Dahlia Society celebrated the centenary of the introduction of the Dahlia into Europe by holding a conference at the Crystal Palace. On that occasion Mr. Shirley Hibberd contributed a paper on the history of the Dahlia, which, with his great literary skill and capacity for research work, had never been surpassed, and remained to this day, in spite of all subsequent attempts by other less competent writers, the most authoritative work on the subject. This paper was printed *in extenso* in the National Dahlia Society's Schedule for 1890, and nothing that later writers had done had contributed to a fuller knowledge of Dahlia history. Mr. Payne ridiculed the suggestion that the Pompon Dahlia was known in 1808, and said that independent and original research among the records failed entirely to establish the fact of its existence until at least fifty years later. He also raised a query as to the employment of the mongrel English word "Collarette" for the French word "Colletterie," and severely challenged the use of the word "Pompon" as applied to the small-flowered Cactus Dahlia. Several speakers followed, but their remarks were chiefly confined to cultural questions relating to the Cactus and Collarette sections, Mr. Wyatt, Mr. J. T. West and the chairman taking part. Mr. Stredwick replied.

The next paper was entitled "The Dahlia as a Decorative Plant for Parks and Gardens," and was received with appreciation by the hearers. Then came a paper by Mr. Harrison Dick on "The Dahlia in America," read by Mr. Curtis. In this there was a good deal of interesting information concerning the historical aspects of the Dahlia in the States and the local Dahlia societies' work there; also difficulties of culture and details concerning the cut flower trade. This paper also raised several points for an interesting discussion, in which many speakers took part.

Votes of thanks to the gentlemen who had contributed papers and to those who took part in the discussions were accorded, also one to the chairman for presiding. This brought the proceedings to a conclusion.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE first meeting of the winter session was held in the East Anglian Institute of Agriculture on Friday, October 2. Mr. C. Wakely presided, and about forty members were present. Mr. Pugh of Messrs. Carter and Co. of Raynes Park gave a very interesting and instructive lecture on "Lawns." The lecturer explained that not only is a lawn an asset to any garden, but of late years had become of great importance on account of games, such as bowls, croquet and tennis, being played upon them. Practical operations, such as seed-sowing, cutting, rolling and levelling, were fully explained by the lecturer. Specimens of seeds and weeds, &c., were shown, and the lecture was illustrated by a fine set of lantern slides. At the conclusion of the discussion a hearty vote of thanks was accorded Mr. Pugh for his excellent lecture.

WARGRAVE GARDENERS' ASSOCIATION.

AT the last meeting of the members an able paper on "Michaelmas Daisies" was given by Mr. P. Wiseman of Messrs. Waterer, Sons and Crisp's nurseries at Hare Hatch. He gave full directions for planting in the border and the best method of arranging them for effect. The shorter varieties were recommended for pot culture, as it deserved. In tubs, too, they made a grand show. A good discussion ensued, and Mr. Wiseman was thanked for his address. Messrs. Waterer and Co. staged a fine exhibit of Michaelmas Daisies, and were thanked for so doing. Mr. Pope was awarded a cultural certificate for a nice group of *Cypripediums*, and Mr. Cox was highly commended for a dish of Peaches.

Brighton, Hove and Sussex Horticultural Society.—It is with much regret that the committee of the above society have decided to abandon the Chrysanthemum show arranged for November 3 and 4, also the lecture on November 19.

THE GARDEN.

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OCTOBER 31, 1914.

NOTES OF THE WEEK.

Medicinal Plants in England.—In Leaflet No. 288, just published, the Board of Agriculture draw attention to the fact that, owing to the war, there is likely to be a shortage of medicinal plants next year. They rightly point out that, in the ordinary way, a few pounds of dried herbs are only disposed of with difficulty; but next year, owing to the shortage, small quantities will doubtless be very welcome to buyers. The leaflet gives the names and cultural details of the herbs mostly in demand, and we hope to publish it in subsequent issues.

An Interesting Tropical Orchid.—The plant illustrated on this page is a native of Madagascar, and bears the somewhat unwieldy name of *Angræcum sesquipedale*. It is one of the most interesting of winter-flowering Orchids, its ivory white blossoms usually opening during November, December and January. Their most remarkable feature is the spur, which often attains a length of from 10 inches to 18 inches. For its successful cultivation this Orchid needs a stove-house where a winter temperature of 60° Fahr. can be maintained. For a rooting medium it should be given a mixture of charcoal, peat and sphagnum moss. It is a plant that deserves to be more widely cultivated where facilities exist for providing the proper temperature.

An Attractive Plant for the Rock Garden.—In *Corydalis Wilsonii* we have a valuable plant for the rock garden. This beautiful Chinese species, of recent introduction, commenced flowering early in the summer, and is still bearing many spikes of its bright yellow flowers, which stand up in a very graceful manner above its attractive, Fern-like foliage. It should be planted in well-drained soil, and if given the protection of a large rock, so much the better, as excessive moisture during the winter is its chief enemy. It is readily raised from seed, and will, when it becomes better known, be found in all gardens where choice flowers are grown.

A Good Autumn Rock Garden Plant.—Of the trailing or prostrate habited sorts flowering in autumn, the Japanese *Sedum Sieboldii* is certainly one of the most distinct and ornamental, and as such merits general cultivation. It is, however, more frequently seen as a pot-grown window

plant or in the greenhouse, and the growers of it in such places are surprised to learn that it is quite hardy. As a good rock garden subject it is worthy of special thought, and, given a well-exposed and sunny position, the heads of rosy coloured flowers are often accompanied by highly coloured leafage. At other times the latter is of glaucous hue, well separated from others of its class. There is a variegated form less good in general effectiveness.

Experiments with American Gooseberry Mildew.—In the annual report of the horticulture branch of the Board of Agriculture considerable space is devoted to work that has been done during the past year in connection with American Goose-

and one that ought to be extensively grown, is Geum Mrs. Bradshaw. Some young plants that we have are still producing their scarlet flowers freely, and have not been without blossoms since early June. Owing to the fact that they are produced on long, branching stems, they are ideal for cutting, and, when arranged with any kind of white flowers, never fail to elicit praise from visitors. This Geum will produce seed freely if allowed to do so, and the seedlings come true and retain the good qualities of their parent. The plant is not fastidious as to soil, though deep cultivation and liberal manuring are appreciated. Can any reader name a more useful hardy perennial than this?

New Garden Suburb in Glasgow.

—THE GARDEN has always taken a warm interest in garden city and suburb schemes and has done much to promote such enterprises. We are pleased to hear of a new garden suburb for Glasgow which was inaugurated on October 17, when the Hazelwood one was the scene of an interesting ceremony — that of switching on the electric current which is to supply lighting, cooking and heating for this new garden suburb. Hazelwood is in a capital position, adjoining Bellahouston Park and the tramway terminus of Dumbreck, and it is likely to become a popular place.

Mr. W. G. Pirie, Dalhousie Castle Gardens.—We learn with pleasure that Mr. W. G. Pirie, Dalhousie Castle Gardens, is to be the new president of the Scottish Horticultural Association. Mr. Pirie is in the first rank of Scottish gardeners, as is attested by the gardens of which he has charge

and his many successes in leading classes at the principal Scottish shows. His employer, Mr. C. W. Cowan, is one of the best supporters of horticulture in Scotland, and Mr. Pirie does full justice to the many choice things which are placed in his charge. A son of the garden, Mr. Pirie is a general favourite with his brother-gardeners, and they will doubtless receive the appointment with acclamation. He has long taken a lively and practical interest in the affairs of the Scottish Horticultural Association and has performed many services on its behalf. Mr. Pirie will form an excellent successor to the present able president, Mr. David King, Osborne Nurseries, Murrayfield, Edinburgh.



ANGRÆCUM SESQUIPEDALE, AN INTERESTING WINTER-FLOWERING ORCHID FROM MADAGASCAR

berry mildew. A number of experiments have been carried out in different parts of the country by spraying with lime-sulphur and other washes, but the results obtained have not been entirely satisfactory. In summing up the experiments it is pointed out that the prompt removal and burning of the affected tips of shoots has, up to the present, proved the best method of dealing with the disease. Other important investigations carried out by this branch during the year relate to the pollination of fruit trees and the wart disease of Potatoes.

A Good Scarlet-Flowered Perennial.—One of the most useful herbaceous plants in the garden,

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Shirley Poppies in October.—I was much interested in the note in your issue for last week on Shirley Poppies flowering at Hampton Court in October. When at Kew about a fortnight ago, I noticed a long stretch of border at the back of the rock garden filled with flowering plants of Virginian Stock. The seed of these had evidently been sown in July, and the effect was certainly very charming. This late sowing of annuals might be much extended, and our gardens in the autumn considerably enriched thereby.—A. B. ESSEX.

When to Plant Tulips.—I am disappointed that Mr. Dunn has not vouchsafed your readers an explanation for the remarkable advice he

ing spray of *Buddleia variabilis veitchiana*, which I consider is one of the best shrubs that blossom in August. It is an exceedingly easy plant to grow, thriving in almost any kind of soil so long as it is well manured, and it quickly makes a noble bush 8 feet to 12 feet high. I find it does much the best when pruned back hard each spring, just before the leaf-buds burst. Treated in this way it will make new growths nearly six feet long during the summer, and in August each is terminated by a beautiful raceme, a foot or more long, of Heliotrope-coloured flowers. Side shoots near the top also blossom, and keep up the display for several weeks. Bumble-bees and also butterflies are exceedingly fond of the flowers. I strongly advise anyone who appreciates autumn-flowering shrubs to plant this *Buddleia* during the present autumn or coming winter.—J. D. M.

The Value of Hardy Heaths.—THE GARDEN has often insisted on the value of the hardy Heaths,



A FLOWERING SPRAY OF *BUDDLEIA VARIABILIS VEITCHIANA*, A BEAUTIFUL HARDY SHRUB FOR AUTUMN EFFECT.

gave them as to the time for planting Darwin Tulips. Mr. J. Duncan Pearson's contribution is interesting, but, unfortunately for him, a short time since I received the bulb catalogue of Messrs. J. R. Pearson and Sons, an old-established firm of high repute, of which, I believe, he is a member. Therein I read on page 14 the following: "We ourselves grow some three acres of Darwin and other late Tulips, and produce finer bulbs than we can procure from anywhere else. Plant in October or November," &c. So out of the mouth of Mr. Pearson's own firm's catalogue I prove my case for late planting. Could better evidence be adduced in favour of it when such good bulbs are obtained by it?—OBSERVER, Weybridge.

A Useful Autumn-Flowering Shrub.—I have read with interest the notes and articles that have appeared in THE GARDEN at different times on hardy shrubs that flower in the autumn. I am sending you herewith a photograph of a flower-

ing spray of *Buddleia variabilis veitchiana*, which I consider is one of the best shrubs that blossom in August. It is an exceedingly easy plant to grow, thriving in almost any kind of soil so long as it is well manured, and it quickly makes a noble bush 8 feet to 12 feet high. I find it does much the best when pruned back hard each spring, just before the leaf-buds burst. Treated in this way it will make new growths nearly six feet long during the summer, and in August each is terminated by a beautiful raceme, a foot or more long, of Heliotrope-coloured flowers. Side shoots near the top also blossom, and keep up the display for several weeks. Bumble-bees and also butterflies are exceedingly fond of the flowers. I strongly advise anyone who appreciates autumn-flowering shrubs to plant this *Buddleia* during the present autumn or coming winter.—J. D. M.

The Value of Hardy Heaths.—THE GARDEN has often insisted on the value of the hardy Heaths,

Daboecias. August—*Cinerea*, *c. atrosanguinea*, *c. alba*, *Tetralix*, *vagans*, *stricta*, *ciliaris*, the three *Daboecias*, *vulgaris*, *Hammondii*, *Alportii*, *Searlii* and *flore pleno*. September—*Cinerea*, *c. atrosanguinea*, *Tetralix*, *vagans*, *ciliaris*, the three *Daboecias*, *vulgaris*, *Hammondii*, *Alportii*, *Searlii* and *flore pleno*. October—*Tetralix*, *vagans*, *ciliaris*, the three *Daboecias*, *vulgaris*, *Alportii*, *Searlii* and a few plants of *mediterranea hybrida*.—MACAULAY MORT, *Black Firs*, *Fulmer*, *Bucks*.

Wanted: Mildew-proof Roses.—Rose-growers who are readers of THE GARDEN naturally look with some expectation for the October Rose Number, and never fail to find much that is interesting and profitable. Personally, I have been particularly interested by the conspectus of the *Pernetiana* section by your contributor "E. E. F." My own great trouble is mildew, which, in my sheltered garden, has this year been a great scourge. It is not so much that it impairs the vitality of the trees or the beauty of the flowers as that it destroys the beauty of the foliage and gives a generally unwholesome look to the Rose-beds. It is high time, surely, that the raisers of new Roses were giving their attention to the creation of a race of Roses immune from mildew. Possibly they are; but in that case the success so far has been small. Would it not be possible to get from those of your readers experienced in Rose-growing a list of Roses which they consider (1) absolutely mildew-proof, (2) possessing good resistant power, though not absolutely immune, and perhaps (3) fairly free from the disease when grown in favourable circumstances? If I could secure a fair number of immune, or nearly immune, varieties, offering a good range of colour, I should eliminate from my garden those most susceptible to the disease, much as I should regret parting with many of them. I have already turned out all the old *Crimson Damasks*, which grew plentifully in my borders, and I am also getting rid of my *Crimson Ramblers*, though they flower in their season uncommonly well. A Rose which I have found to be absolutely mildew-proof is *Boule de Neige*, the value of which as a border Rose does not seem to be sufficiently appreciated. I notice that some correspondents of THE GARDEN find *Grüss an Teplitz* predisposed to the disease, whereas with me it is one of the least infested. General Macarthur is another Rose with good resistant powers. *Juliet* has the foliage pretty free from the disease, but the thorns are badly infected. It is the fresh new growth of Rose foliage in August and September that is so liable to mildew, the mature foliage produced earlier in the year being free of the pest. My practice is to cut off the foliage infected and burn it; but this means sacrificing a deal of bloom. As for washes and sprays, I have little faith in their efficacy. Anyhow, the spraying of all my Roses once a fortnight, as recommended in the counsel of perfection, is a task for which I have neither time nor energy. I should be grateful, therefore, to any of your readers who could put me on to good Roses little predisposed to mildew. I am afraid the recent creations of rosarians are too exquisite for this mildewy world.—SOMERSET. [We shall be pleased to receive particulars of mildew-proof Roses, or those that are nearly so, from other readers. We have found the following very free: *Duchess of Wellington*, *General Macarthur*, *Lady Alice Stanley*, *Miss Cynthia Forde*, *Arthur R. Goodwin*, *Grüss an Tep'ltz*, *Jessie*, *Château de Clos Vougeot* and *Zephyrine Drouhin*.—ED.]

THE GLADIOLUS IN AUTUMN.

AUTUMN is a time of special importance in the life-history of the Gladiolus, for it is according to the treatment the corms receive whether they shall become decadent or continue in a condition of health and vigour. As long as the foliage remains green, it is an indication that the corms are not yet mature, and therefore to lift the latter at that stage is not correct treatment. At the same time, in late localities it may be essential, on account of the season, to lift them before growth is completed, and the plan in such cases is to lift the corms with as much soil attached to the roots as possible, and to lay them in a cool structure till the foliage turns yellow. That is the way I proceed with all our stock, which at the time of removal from the ground still retains a measure of greenness in the leaves, and it is very noticeable how the large corms and the small ones nestling at their bases continue to swell after lifting.

Yearling seedlings, as well as the small corms of a year's growth, do much better when not lifted, but protected by some suitable covering during the winter. In many parts of the country this plan might be pursued without the least danger of losing the plants, more especially when the newer strains are grown, these proving much hardier than the old *gandavensis* section, and they are at the same time less subject to disease. They are also, many of them, far better adapted to garden decoration, though less desirable from the florist's point of view. If one is careful of the "spawn," or young bulbs which are formed at the base of the corms, in some instances in very great numbers, a supply of fresh, vigorous corms is quite easy to provide, and if to these seedlings are added from seeds saved at home, a very interesting addition to their number is secured. The seedlings may be of no use commercially, but some of the varieties seem to reproduce themselves fairly well from seeds, and, anyhow, from a good selection it is rare to find a seedling that has not some valuable qualities.

At the time of writing, Peace, an improved form to all appearance of the very old Shakespeare, is still beautiful. I grow Gladioli in conjunction with other plants, as well to provide colour before they bloom as when they are past. In this instance *Cuphea strigillosa* (Cyanea) is the supernumerary Dawn, a lovely form just over, was associated with a mauve Viola. The scarlet Mrs. Francis King has *Nepeta Mussinii*, and the loveliest of all, Halley, was associated with common Cornflower and *Campanula pyramidalis*. The last named is a very free seeder, and I have this autumn obtained thousands of seeds of this variety. I must not omit to point out how small corms usually provide flowers very late in the year, and these and seedlings are still promising many spikes in addition to those which are open. By cutting the latest and opening them in a heated structure or a room, a very late supply of flowers is possible.

A gardener recently was anxious to know how seedlings were treated. My plan is to sow seed thickly in ordinary cutting-boxes early in the year, transplanting the seedlings into the garden about the end of May, in the same way as Onions are raised and transplanted.

R. P. BROTHERSTON.

THE HEARTSEASE OR PANSY.

ALTHOUGH the common Heartsease that we find growing wild in our corn-fields has been known for a great many years and is to be found illustrated in some of the old herbals, it was not until about a century ago that any serious efforts were made to improve it as a garden flower. The old illustrations referred to show us ragged-looking plants bearing a few miniature flowers, the sepals of which are much longer than the petals. Comparing these illustrations with the beautiful symmetrical Pansies that adorn our gardens to-day, we get a valuable object-lesson in what can be done by intelligent and enthusiastic perseverance on practical, rational lines. For the ancestors of our modern garden Pansies we are indebted to Lord Gambier and his gardener, Mr. Thompson, who, at Iver, in Buckinghamshire, about the year 1813, began experimenting with the common wild Heartsease, and who, during the following quarter of a century, raised varieties which at that time were rightly regarded as wonderful improvements on the type.

In the eighties of the last century, the florist's Pansies, as the best of the large-flowered varieties were termed, were at their zenith of fame; but since then their popularity has waned considerably, though everyone who sees them well grown cannot fail to be charmed with their quaint, cat-faced flowers of almost circular outline. It is in the way of form and size that these modern giants differ mainly from the original Heartsease, the flowers of which, as I have already pointed out, are small and ragged-looking, and to-day scarcely worth a passing notice. The introduction of the hardier and more continuous flowering garden Viola or Tufted Pansy undoubtedly did much to oust the large-flowered Pansies from their erstwhile proud position, particularly in the hot Southern gardens, where they always, more or less, lived on sufferance and seldom appeared to be really happy. Later still the miniature Tufted Pansies, or Violettas as some are pleased to call them, were introduced, and perfect gems they are, particularly when well placed in a cool nook in the rock garden. Thus, in briefly tracing the history of the garden forms of Heartsease, we see that from a small flower those of large dimensions were evolved; then, with the aid of other foreign species, smaller-flowered, tufted plants were secured, and, from these, smaller flowers and more diminutive habit again. This, to the unknowing, may seem a reversion, but one has only to compare the miniature Tufted Pansies of to-day with the wild Heartsease to see that everything else which is good has been retained.

The cultivation of all types of the modern Pansy is the same; but, as will already have been inferred, the Tufted Pansies, owing to their more vigorous constitution and free-flowering propensities, give us the best returns, particularly in the Southern Counties. In the more moist and cooler Northern climate, the large-flowered varieties are still grown to perfection, Scottish gardeners especially excelling in their cultivation. In the Western Counties of England, too, these Pansies thrive apace, but it is seldom that one finds them looking really happy in the London district. The Tufted Pansy and its miniature counterpart, however, will flourish almost anywhere if a few cultural essentials are

provided. The most important of these is undoubtedly the soil. Dry, sandy soil on the one hand and heavy clay on the other are equally bad for our Pansies, and a good deal of ingenuity is called for to make them at all suitable. By heavily manuring the sandy soil with well-decayed cow-manure, vegetable refuse and, if possible, some clay, or, indeed, anything that will tend to hold moisture and provide a cool rambling place for the roots, we can do much to enable us to grow at least the Tufted Pansies. Clay soil needs to be made porous, and to this end plenty of long stable manure, burnt earth, sand, old mortar and leaf-soil should be dug in and well mixed with the soil in autumn, the whole surface being left rough for the winter frosts to pulverise. Between these two extremes of soil we get many kinds that, by intelligent cultivation, can be made suitable for our Pansies. We must, however, always bear in mind that slight shade from scorching midday sun and, more important still, a cool medium for the roots, with plenty of humus as food, are essentials.

There are two ways of increasing the large-flowered Pansies—by means of cuttings and by seed. The former is the method usually preferred, owing to the fact that seedlings rarely come true. Both these methods can be applied to the Tufted Pansies, which may also be divided during the early days of spring. Cuttings made from young shoots are usually planted in cold frames in September and October, and seeds are also sown in July or early August, though some prefer to sow seed in January and February. The plants from seed sown in August will flower early the following spring, while those raised early in the year will flower later. Planting is also successfully carried out at two periods, viz., autumn and spring. Where the plants are ready and the soil is of a sandy, well-drained character, autumn planting has much to commend it; but where clay predominates, or excessive atmospheric moisture is experienced, the work is best left until the spring, the first week in April being a good time to get the plants into their flowering quarters. On their value in the garden there is no need to dilate. Few plants will give such a continuous and pleasing display over so long a period as the Tufted Pansies, and the purposes to which they may be put are many. There are numerous named varieties now obtainable, and all the following can be relied upon to do well under ordinarily good conditions: Large-flowered Pansies—Bobby Harper, white; Annie D. Lister, yellow; Colonel M. R. G. Buchanan, brown, yellow and violet; Lord Roberts, yellow and carmine; W. B. Child, yellow and purple. Tufted Pansies—A. J. Rowberry, pale lemon yellow; Archie Grant, deep purple; Bullion, deep golden yellow; Christiana, pale sulphur; Countess of Hopetoun, white; J. B. Riding, purplish mauve; Jubilee, dark purple; Lavender Queen, pale purplish mauve flowers; Maggie Mott, lavender blue, very free flowering; Marchioness, white; Moseley Perfection, deep yellow; Mrs. Chichester, sulphur white, edged deep blue; Royal Sovereign, golden yellow; and W. H. Woodgate, pale lavender blue. Miniature Tufted Pansies—Cynthia, bluish lilac; Diana, primrose yellow; Eileen, deep blue, yellow eye; Estelle, pure white, very small; Lavinia, bluish lavender; Robbie Jenkins, white, suffused yellow on lower petals; and Thisbe, pale bluish with yellow eye. These lists are by no means exhaustive, but all the varieties mentioned are good.

B. B.

THE BEST HARDY BROOMS

DURING the month of May, when most spring flowers are at their best, it is difficult to imagine a more beautiful sight than a deep railway cutting, the banks of which are clothed with the semi-pendent, golden-wreathed shoots of the common Broom, *Cytisus scoparius*. On waste land, wherever the soil is poor, this beautiful wild shrub will be found, usually in clusters of varying size, sometimes scarcely exceeding a yard in diameter and at others extending for many times that distance.



THE WHITE SPANISH BROOM (*CYTISUS ALBUS*).

It is from this grouping of Nature that we should take a lesson when attempting to cultivate shrubs of this kind; isolated bushes, beautiful as they are, do not give us the same bold effects as colonies of three or more, according to the size of the garden and the space to be filled. Although the wild Broom is a very beautiful plant, there are a number of others, some varieties, some species and others hybrids, that are perfectly hardy in our gardens. These vary in dimensions from almost prostrate-growing kinds, suitable for the rock garden, to others that form small trees; hence their value for different positions in the garden can scarcely be over-estimated.

Soil and Cultivation.—To those whose gardens are composed mainly of sand or very poor soil, these hardy Brooms are of the greatest value. The more starved they are, the better they seem to flower, although growth is not, perhaps, quite so rapid as where the diet is rather more generous. For the wild garden, where there are rugged banks to clothe, or large, irregular-shaped beds to fill, no better plants can be found. It is, however, always advisable to keep them clear of weeds until they have attained goodly dimensions, so that they are able to fight for themselves in the great battle of the survival of the fittest. Young plants in pots should be purchased, as

Brooms resent serious disturbance of their roots. Most of the species can be raised from seeds sown in pots or boxes of sandy soil in autumn or spring, but the varieties and hybrids are usually propagated by means of cuttings. This, however, is work for the nurseryman to undertake.

Pruning.—Young plants should be cut back rather severely for the first year or two after planting, so as to induce them to form a bushy habit; but once the foundation is laid for this, little use need be made of the knife. The purple-flowered Broom, *Cytisus purpureus*, however, differs from others in this respect, as it benefits considerably by being cut back nearly to the ground-level each year after flowering, young

shoots springing from the base to take the place of those removed. As already stated, there are many kinds of Brooms that are suitable for our gardens. The best are included in the following list:

Cytisus ætnensis is the Mount Etna Broom and one of the latest to flower, being at its best usually in August. It eventually makes a small tree with pendulous, rush-like shoots, whence its golden flowers are produced in abundance.

***C. albus*.**—This is the white Spanish Broom. It forms a semi-pendulous bush from 4 feet to 8 feet in height, and flowers freely in May.

***C. Ardoinii*.**—A dwarf species from the Maritime Alps. It rarely exceeds a foot in height, and is therefore a good shrub for the rock garden. It produces small yellow flowers in May.

***C. Beanii*.**—A dwarf hybrid raised at Kew and named after the Assistant-Curator, Mr. W. J. Bean. It is a gem of the rock garden, its golden yellow flowers being produced freely in May.

***C. biflorus*.**—This makes a neat shrub almost 5 feet high, and is one of the earliest to flower, its small yellow blossoms being produced in pairs in April.

C. Dallimorei is another hybrid raised at Kew by Mr. W. Dallimore, after whom it was named. Its parents are *C. alba* and *C. scoparius andreanus*,

and it is intermediate between the two. It forms an erect bush several feet in height, and produces its curious purplish-coloured flowers freely in May.

C. decumbens is a native of Europe, and, like *Ardoinii*, is best suited for the rock garden. It rarely exceeds 6 inches in height, and has yellow flowers which open in May.

***C. kewensis*.**—This is a beautiful little hybrid that was raised at Kew some years ago. Owing to its prostrate habit it is well adapted for the rock garden. At Friar Park Sir Frank Crisp has it planted in colonies at the summit of large boulders, so that its shoots hang partially suspended over miniature precipices. When clothed with their pale cream-coloured flowers in May, the plants give one the impression of a cascade of flowers.

***C. nigricans*.**—This is a late-flowering European species, its deep yellow blossoms opening in July. It makes shoots 4 feet or rather more in height, and flowers on the current year's wood; hence as much old growth as possible needs to be pruned away in winter or early spring.

***C. præcox*.**—One of the prettiest of the early flowering Brooms. It grows from 6 feet to 8 feet in height, and flowers when quite young. Its blossoms are creamy white, and usually open during the last week in April.

***C. purpureus*.**—This is a dwarf-growing species when pruned annually as already advised. It produces its purple flowers in May.

C. scoparius is our wild Broom, and is well known to every lover of the country. There are several beautiful varieties of it, the one named *andreanus* being most frequently met with. It has the same habit and freedom of flowering as the type, but each of the wing petals is heavily blotched with warm, brownish crimson. The Moonlight Broom, *C. scoparius sulphureus*, is another beautiful variation of the wild Broom. It has pale sulphur-coloured flowers, which are produced in great profusion in May. It has a rather more prostrate habit than the type.

The Yellow Spanish Broom.—This belongs to another family, its botanical name being *Spartium junceum*. It thrives under similar conditions to those advised for the Brooms proper, and produces seed freely, from which young plants are easily raised if the seeds are sown in pots in a cold frame. It makes a bush 8 feet or more in height, and flowers for a long time during July and August. H.

STORAGE AND DISPOSAL OF APPLES AND PEARS.

THE following special leaflet has just been issued by the Board of Agriculture: "It is believed that there is a very large number of gardens and small orchards in which Apple and Pear trees are to be found, the fruit of which is not put to its most profitable use by the owners. Much is wasted altogether, and more suffers in quality through the neglect of certain simple precautions.

Picking the Fruit.—In the first place, many varieties of Apples and Pears are picked too soon. The reasons which make it sometimes necessary for a large grower to pick his fruit before it is ripe seldom apply in the case of the small grower. Early varieties can be picked before they are fully ripe and allowed to mature in a cool room.

All late varieties, however, should be allowed to hang on the tree as long as possible. Such varieties are, among Apples, Lane's Prince Albert, Newton Wonder, Wellington, Norfolk Beefing, Claygate Pearmain, Winter Pearmain or Duck's-bill, Mannington, Sturmer, Alfriston and Court Pendu Plat; and, among Pears, Catillac, Easter Beurré, Beurré Rance, Chaumontel, Beurré Diel, Duchesse d'Angoulême and Doyenné du Comice.

Fruit of these and other late varieties should be allowed to remain on the trees till the fruit comes off easily when the Apple or Pear is lifted and given a slight twist. Care should be taken not to break off the young fruit-buds at the base of the stalk, and, of course, fruit should never be gathered by shaking the tree or other violent method. Fruit which is to be kept must be gathered into a basket, preferably lined with some soft material, such as a piece of cloth, to prevent bruising. Diseased and damaged fruit should be placed in a separate basket.

Storing the Fruit.—The requirements for the proper storage of Apples and Pears are not the same. Apples require to be kept in a cool and rather moist place, where there is enough ventilation to prevent saturation. Pears require warm, dry surroundings, but even under the most favourable conditions they will not keep long.

A few days after Apples are put in store they begin to "sweat," and continue to do so for about three weeks. During this time there must be a free current of air round them, which must not be too dry, or they will begin to shrivel. After the "sweating" period is over, this is not so important. Small growers who have only a few Apples to keep will find that a good method is to wait till "sweating" is over, and then pack them as closely as possible in a large earthenware jar. The jar should be covered with a piece of roofing slate or stone and stored in a cool shed or cellar, and the Apples will keep plump and good as long as it is possible to keep the variety. For larger growers a shed or storehouse is required if no cool cellar is available, and in preparing a store the following points should be remembered:

1. The fruit must be protected from frost, but subject to this precaution the temperature should be as low and equable as possible. A cave in a sand or chalk bank makes an excellent storehouse.

2. A moist atmosphere is necessary. The best kind of floor is the bare earth, which may be damped occasionally.

3. Ventilation to prevent stagnant and heated air is necessary, especially during the "sweating" period.

4. Apples easily absorb flavours from their surroundings. They should not be put on new wooden shelves, or on straw or hay, nor should any strong-smelling vegetable or other material be kept in the same room. They should be placed on slate shelves, or old seasoned wood may be used.

A useful Apple store may be made by digging a large trench about ten feet wide and as long as is required. The depth should be about two feet. A wall one brick thick and about four feet high should then be built on either side, and the soil that has been dug out should be heaped up against the outside of the wall. A roof of rough rafters thickly covered with thatch should be built over the top, and shelves can then be fitted inside, on

which the Apples may be heaped. There should be a door at each end so arranged as to admit air and exclude light.

Apples should never be stored in an attic or top room of a house.

Grading of Apples and Pears.—If the fruit is to be consumed by the grower, there is no advantage in selecting the fruit beyond the fact that it is better to eat the riper specimens first. If the fruit is to be sold, it is very important that all the Apples or Pears offered for sale should be of similar size and quality. The practice of "topping" the consignment with a better class of fruit cannot be too severely condemned.

The following recommendations are offered for the guidance of growers who consign their fruit to market:

1. Apples and Pears should be packed in boxes of uniform size, and should contain as far as possible the same number of fruits. It is more important, however, that the net weight of the consignment should be the same than that the number should be constant. A convenient size for the boxes is 20 inches long, 10 inches deep and 11 inches broad—all inside measurement. These boxes will hold about forty pounds. They can be obtained from box-making firms.

2. The approximate weight should be put on the outside of the box as an indication to the seller of its contents.



CYTISUS KEWENSIS, A CHARMING DWARF SHRUB FOR THE ROCK GARDEN.

3. The name of the consigner, or some mark by which the salesman can identify him, should be put on the box.

Fruit thus consigned should secure a more ready sale than fruit badly and irregularly packed, and will lead to better prices and further orders.

Small growers are strongly advised to satisfy the local demand for fruit before consigning to large markets, as the risk of a glut and consequent unremunerative prices is thereby avoided."

NOTES ON CHRYSANTHEMUMS.

AFTER many months of close attention to the welfare of the plants, the cultivator will now have a good idea of the quality of the blooms. All the plants for the production of large blooms, and others that are to be used for the furnishing of the conservatory, greenhouse and porch during the weeks of November and the early part of December, will now be under glass.

Ventilation.—The cultivator must study the state of the weather day by day. The plants need abundance of fresh air without being subjected to cold draughts, so that when the weather is favourable all ventilators should be opened wide, especially when there is a calm. As the colour of the petals shows and, in the case of the earliest varieties, as their blooms open, less air must be admitted. The fullest ventilation should be given from ten o'clock to two o'clock. Gradually increase the ventilation, and also gradually decrease it in the afternoon. A very sudden decrease would result in much moisture settling on the blooms, and if this happens day after day for a fortnight or so without adequate artificial heat to dispel it, then the blooms may become spotted and partly spoiled. Always reduce the amount of front air more than the top, and as the blooms approach full development, almost close the front ventilators.

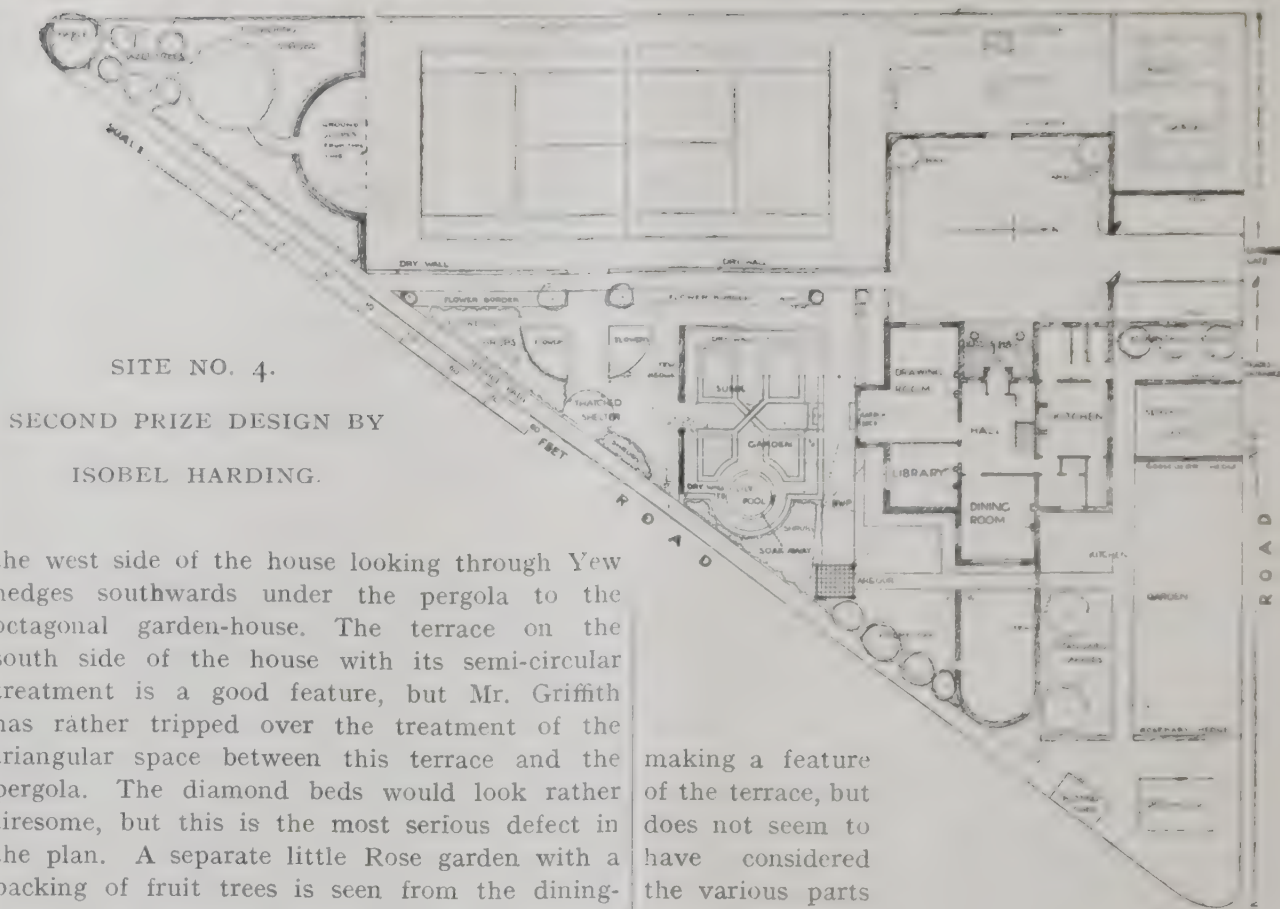
Watering and Feeding.—As the pots are closer together than they were outside, and as less air can pass them, the soil does not dry up as quickly now that the plants are sheltered. Only apply water in the forenoon, and also any liquid manures. Keep the soil in a regular state of moisture and be careful not to overfeed the plants. It is an excellent plan to mix an approved artificial manure with some rich sifted loam—loam and leaf-soil in equal proportions—and put on a very thin layer of the mixture once a week. All water supplied must be given through a rosed watering-can. Avon

THE LITTLE GARDEN.

FURTHER COMPETITION NOTES.

WE now continue our notes on some of the prize designs. Miss Isobel Harding secured the second prize for Site No. 4 with a well-thought-out scheme, which successfully avoided the difficulties of the triangular space south of the main front. From the garden door to the drawing-room there would be a pretty prospect across the sunk garden to the thatched summer-house. From the dining-room a pretty outlook is given into the little Yew-hedged garden with a semi-circular end. The standard Apple trees to the north of this little spot form a good screen between the pleasure garden and the kitchen garden, and also shut off the business corner of the garden devoted to greenhouse and potting-shed. The Mountain Ash trees between the main entrance from the road and the trades entrance would also form a satisfactory screen, and the servants' little garden is pleasantly disposed to give an outlook from the kitchen window. The entrance court is neatly managed, with a Rose garden to the north-west of it and a sundial and seat on the axial line of the entrance door of the house. The south corner is also well contrived, and the chief defect of the scheme is the provision of the long service path along the south-east boundary which borders on a road. This would give to the passer-by an unattractive impression of the whole garden, and would be uninteresting from within.

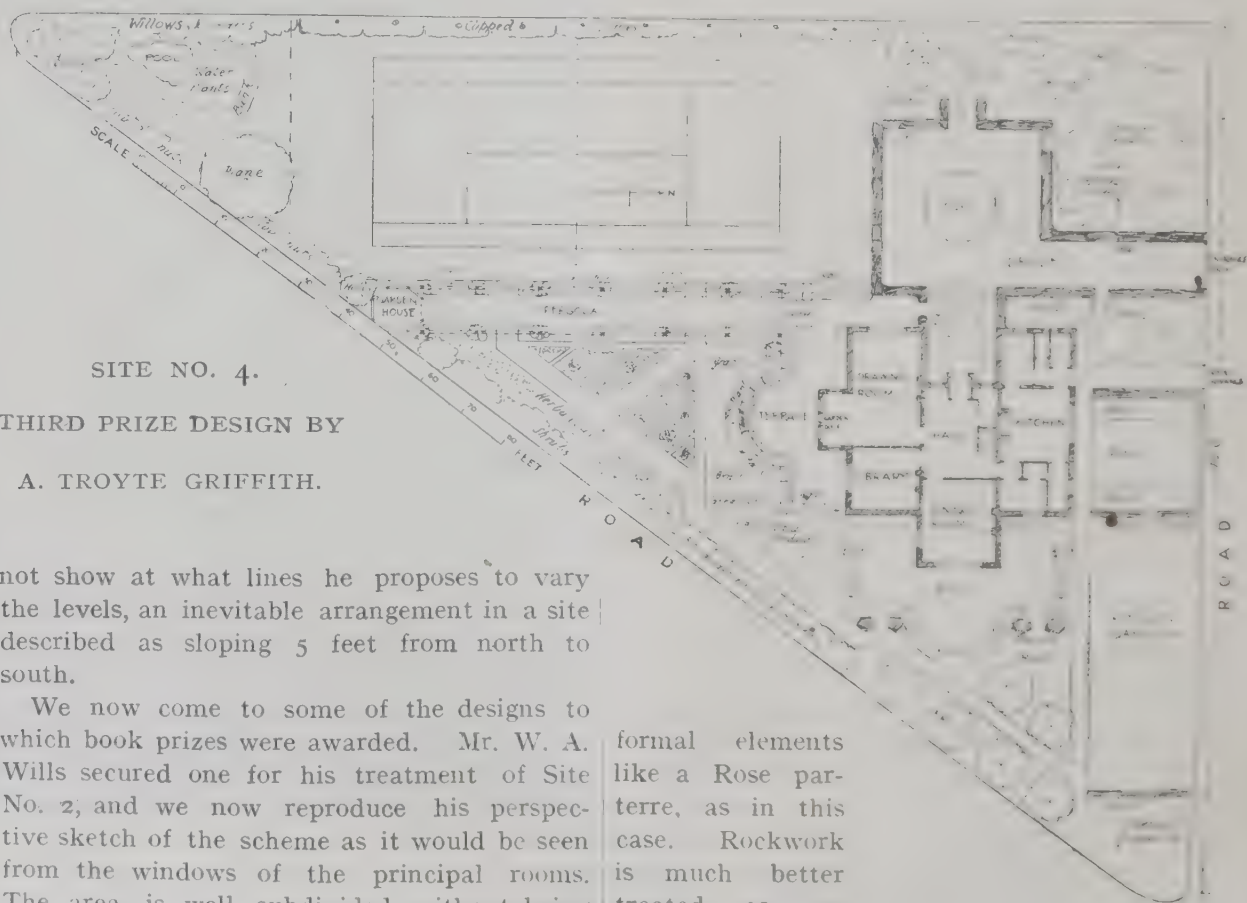
The third prize for Site No. 4 was awarded to Mr. A. Troyte Griffith. The little hedged entrance court is distinctly successful, with its trees and spring garden on the west side. The tennis lawn is placed north and south, and the south angle of the site is well employed as a little pool garden where water plants could seek hospitality. The best feature of the scheme is the very charming view which can be got from the paved space on



SITE NO. 4.
SECOND PRIZE DESIGN BY
ISOBEL HARDING.

the west side of the house looking through Yew hedges southwards under the pergola to the octagonal garden-house. The terrace on the south side of the house with its semi-circular treatment is a good feature, but Mr. Griffith has rather tripped over the treatment of the triangular space between this terrace and the pergola. The diamond beds would look rather tiresome, but this is the most serious defect in the plan. A separate little Rose garden with a backing of fruit trees is seen from the dining-room. The kitchen garden in the north-east corner would be better for some more definite screen. The servants' little garden opposite the kitchen window, with its grass plot and herb border screened from the road and trades entrance by a Laurel hedge, is happily arranged. A defect of the design is that Mr. Griffith does

making a feature of the terrace, but does not seem to have considered the various parts of the garden in relation to the garden doors of the house. He has ventured upon that very difficult problem the design of a rock garden, and, it can scarcely be said, with any great success. In a general way it is better not to attempt to combine rockwork with



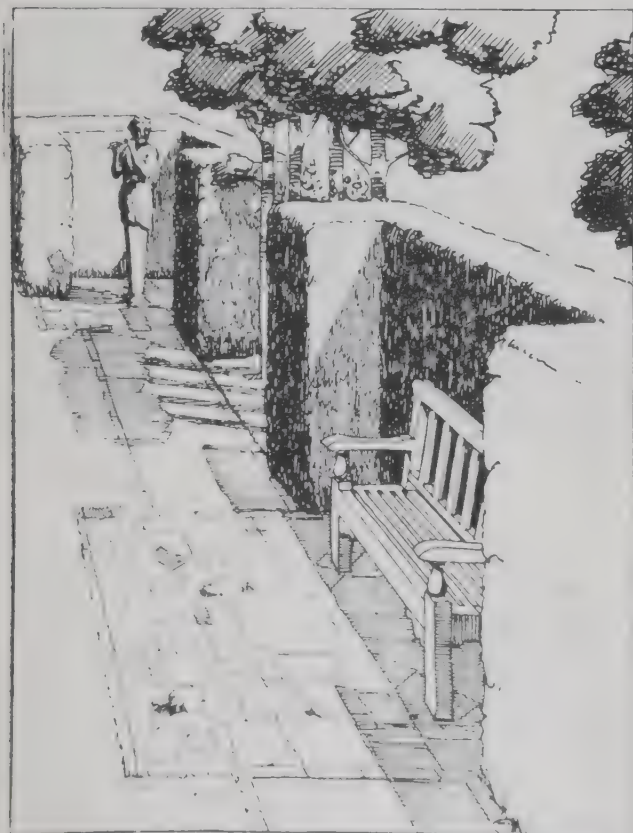
SITE NO. 4.
THIRD PRIZE DESIGN BY
A. TROYTE GRIFFITH.

not show at what lines he proposes to vary the levels, an inevitable arrangement in a site described as sloping 5 feet from north to south.

We now come to some of the designs to which book prizes were awarded. Mr. W. A. Wills secured one for his treatment of Site No. 2, and we now reproduce his perspective sketch of the scheme as it would be seen from the windows of the principal rooms. The area is well subdivided without being too much cut up, and the curved edge at the end of the lawn, with its Yew arch leading to a pergola, would make an effective little scheme, the vista being closed by an octagonal arbour. The kitchen garden is divided in a practical way, and it is evidently the intention to divide it from the flower garden by a stout hedge, though this is not shown on Mr. Wills' plan.

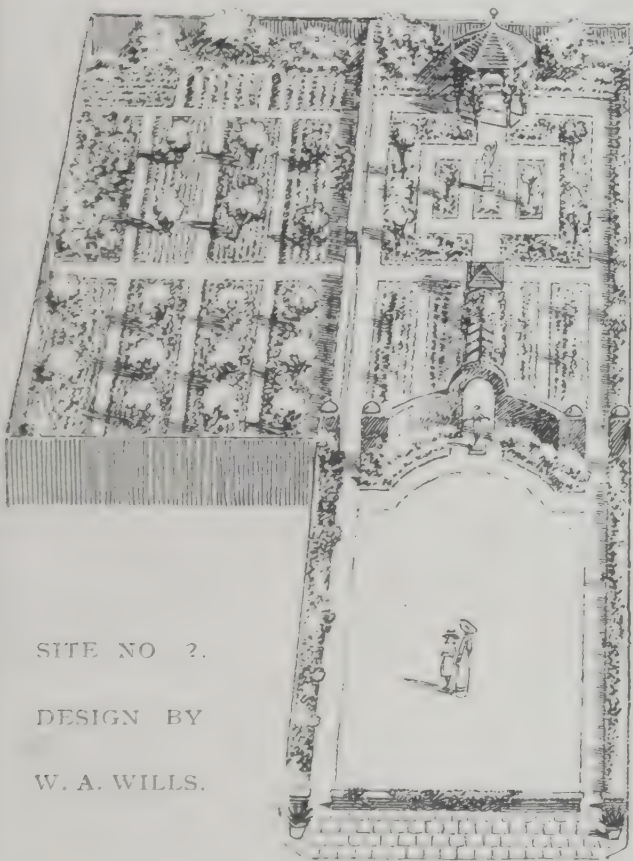
We also reproduce Mr. Weall's design for Site No. 2, which also secured a book prize. He has utilised the slope of the site by

formal elements like a Rose parterre, as in this case. Rockwork is much better treated as an independent item, and altogether screened from the more regular features of the garden. The placing of the Rose pergola has also proved somewhat of a snare. It has its value in dividing the Rose garden from the herbaceous garden, but it is placed over a path which does not lead to anywhere in particular. The pergola should always be regarded as a connecting link between two definite parts of the garden, and not as a thing which is justified in its own right wherever it may be put.



SITE NO. 3.—THIRD PRIZE DESIGN BY
KENNETH DALGLIESH.

Miss Norah Geddes has devised an interesting and simple scheme for the same site, but, as in all the designs she submitted, has concentrated too much attention on flowers, to the almost complete disregard of vegetables. The scheme, therefore, is not so well balanced as it should be. In a design of this kind, which is very simple in its outlines, success would depend chiefly on the planting scheme. The little arbour seat to the north of the lawn is intended to be covered with Sweet Pea Tennant Spencer, Clarkia, Delphinium, Monthly Roses, &c. The same criticisms apply to the design by Miss Geddes for Site No. 3 (not reproduced). The scheme is good, but there is no space allowed for vegetables,



SITE NO. 2.

DESIGN BY

W. A. WILLS.

which is hardly reasonable in a garden of such a size.

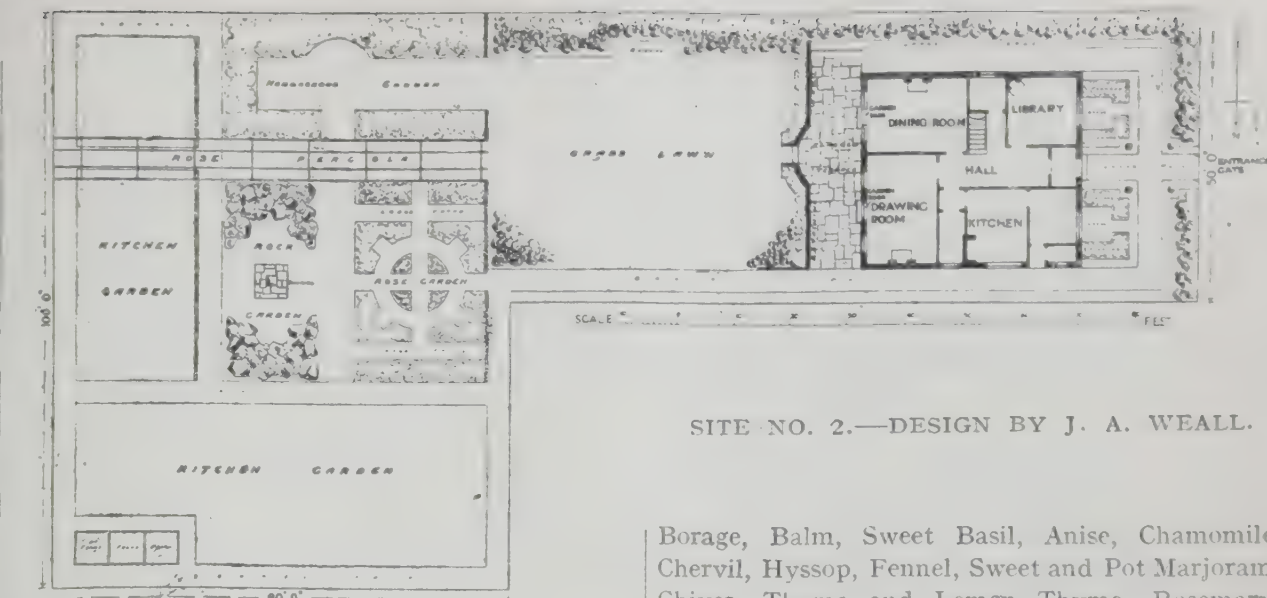
A final series of prize designs will be reproduced next week.

L. W.

SEASONABLE NOTES ON VEGETABLES.

Cabbages.—Continue to put out batches of plants on vacant plots, where Potatoes have been lifted, for example. All that is required in the way of preparation is to remove the haulm and any diseased tubers, and level the surface with a fork or rake. Draw drills 18 inches or 2 feet apart with the corner of a hoe, and dibble the plants in 9 inches apart if space is limited, as alternate plants can be cut out in the spring when half-grown to give space to those left to grow to full size. Give the plants a good soaking of water to induce them to make a quick start into growth. Such varieties as Favourite, April, Harbinger, Pioneer, Model and Springtide are all good.

Celery.—Continue to earth up all batches as growth proceeds. In the case of that blanched with brown paper for early supplies, and also the latest batch which has not been earthed



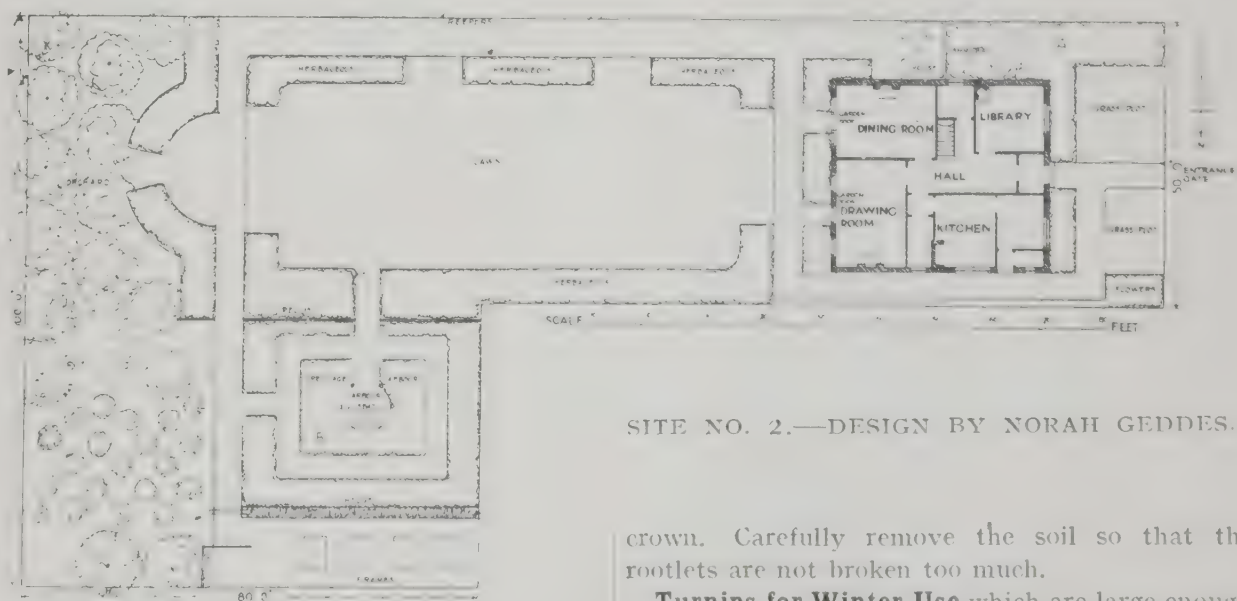
SITE NO. 2.—DESIGN BY J. A. WEALL.

at all, give the roots a thorough soaking of water before earthing, which will hasten growth considerably. When earthing Celery with soil, great care should be taken to make sure the soil does not get into the centre of the plants or be chopped down from the side in large lumps, which press unduly on the plants, forcing them out of an upright position, and rendering them unsightly when dug. In chopping the soil down on each side of the trench, it should be made quite fine and be evenly placed about the plants, at the same time holding these quite upright with the leaves kept close together, either by tying them with raffia or held

Borage, Balm, Sweet Basil, Anise, Chamomile, Chervil, Hyssop, Fennel, Sweet and Pot Marjoram, Chives, Thyme and Lemon Thyme, Rosemary, Horehound, Parsley, Winter Savory, Dill, Rue and French Sorrel. Quite small pieces of each quickly grow into serviceable clumps. After planting, mulch the surface with half-decayed leaves mixed with old potting soil and wood-ashes.

Rhubarb.—Lift crowns for an early supply, placing them in a Mushroom-house where such a structure exists. Under the stage in the greenhouse or stove, or in a closely fitting deep box in the stokehole near the boiler will suffice if sufficient moisture is provided.

Salsify and Scorzonera should be lifted and stored in road sand in a cool frost-proof shed or cellar, cutting off the tops not too near the



SITE NO. 2.—DESIGN BY NORAH GEDDES.

crown. Carefully remove the soil so that the rootlets are not broken too much.

Turnips for Winter Use which are large enough should be stored in a cool place in sand, first cutting off their tops not too close to the crown. A little frost would not hurt them, but the storing checks the growth. Later crops which are half or less grown should have the soil frequently stirred between the rows, and, if a tender variety, should, on the approach of frost, have a little soil drawn over the crowns as a protection.

Parsley.—Thin the plants where too crowded, either by removal of the large old leaves or by drawing a plant here and there, as, the stockier the plants are, the more likelihood there will be of their standing well through the winter. Continue to prick out plants in frames as a certain means of providing a full supply during adverse weather in the winter. Temporary turf pits covered with old lights answer this purpose. Any means adopted of affording protection from snow, frost or heavy rain is all in favour of this herb.

Carrots.—The main batch should be lifted, cleaned, dried and stored in sand in a frost-proof

by the hand while the soil is placed around the plants.

Herbs.—Now is a good time to replant, reduce or increase the varieties, according to requirements. As a rule, these necessary ingredients of the kitchen are almost ignored or put in any out-of-the-way corner and much neglected. A narrow east border is a suitable site. Each kind should have its small allotted space, and, when carefully attended to, this phase of the garden can be made quite interesting and useful. Deeply trenched but not too heavily manured soil is necessary to ensure success. If the soil is stiff and retentive of moisture and naturally cold in the spring, deep trenching is a boon to these plants, as they lie drier during the winter and are not nearly so liable to decay at the roots. Small patches of each will be ample to meet the requirements of an ordinary household. The salient kinds are Mint, red and green Sage, Tarragon,

shed. Growing plants in frames should be thinned, the soil stirred, sprinkling soot over the leaves, and keeping the frames closer and protected at night to encourage quick growth.

Seakale.—An early batch of roots should be dug up and placed in their winter quarters, whether in large pots with an inverted one on top, or in boxes or pits in the Mushroom-house, and be kept

next is 6 inches to 7 inches from the first, and so on for four or five rows, increasing the next few rows to half an inch wider apart. The first circle is then drawn with a peg round the centre, and the first row of Aubrietias planted 7 inches to 8 inches apart. To ensure the Tulips coming alternately in the row, the Aubrietias in the rows must be even in number. Thus, if eight

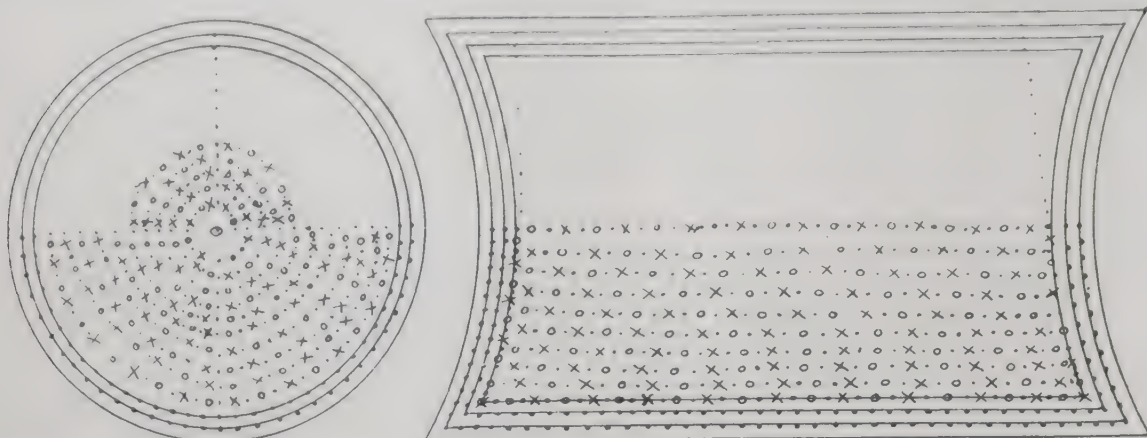


FIG. 1.—DOTS, AUBRIETIA; CIRCLES, EARLY FLOWERING TULIPS; CROSSES, MAY-FLOWERING TULIPS; TWO OUTSIDE LINES, WHITE DAISIES.

moist and free from light by covering the crowns with freshly gathered clean Oak or Beech leaves.

Swanmore, Hants.

E. MOLYNEUX.

SOME HINTS ON SPRING BEDDING.

(Continued from page 503.)

HAVING given a brief account of how the plants are produced, I will now describe how the beds are planted. For a number of years I have adopted a system of planting the principal beds with early and May flowering Tulips in the same bed, selecting as nearly as possible the same colour from each class, thus prolonging the show of bloom to two months instead of one, the May-flowering Tulips coming into flower as the early ones go off. As the season of growth is limited, thick planting is necessary if the beds are to be effective; also the bulbs are planted in between the plants in the row, and not between the rows, thus giving room for the use of the Dutch hoe in the early spring without any fear of injuring the bulbs.

The beds in the principal gardens here are circular and oblong alternately on each side of the main path or thoroughfare to the sea. They are usually planted in pairs opposite each other. The circular beds are 14 feet in diameter, and have one tall *Dracæna australis* in the centre of each. The oblong beds have semi-circular ends, and are 23 feet by 14 feet.

Preparing the Beds.—The beds are prepared in the usual way, dug deeply, and manured where necessary. Soot is added where Pansies and Violas are planted, and lime in the Wallflower beds. If possible, the beds are dug over in the morning of the day they are planted, well trodden with the feet, and raked over with a wooden rake. By so doing they are in much better condition for planting than if dug a few days previously. The circular beds are marked out as shown in Fig. 1 for convenience in planting. Assuming the bed is for Aubrietia, with two rows on the edge for white Daisies or *Alyssum saxatile compactum*, the first peg is 8 inches from the grass edge, the

plants are in the first row, eight Tulips can be planted, four of each, early and May flowering.

Planting.—The Aubrietias are first planted firmly and then the bulbs between them, each row being completed before another is begun. This is continued right out to the third row from the edge. The two rows of edging are planted without any bulbs between them. The foregoing remarks also apply to all the circular beds planted with Pansies, Violas, Polyanthuses, double Arabis, Daisies and Myosotis. The circular beds of Wallflowers are planted in a similar manner; but the space between the rows and the plants in the row is increased according to the size of the plants, viz., 8 inches to 9 inches between the rows and 10 inches to 12 inches between the plants. In the latter are usually planted old May-flowering Tulips or tall-growing Narcissi between the plants.

The Oblong Beds are planted in the same way as the circular ones, the rows marked at the end with

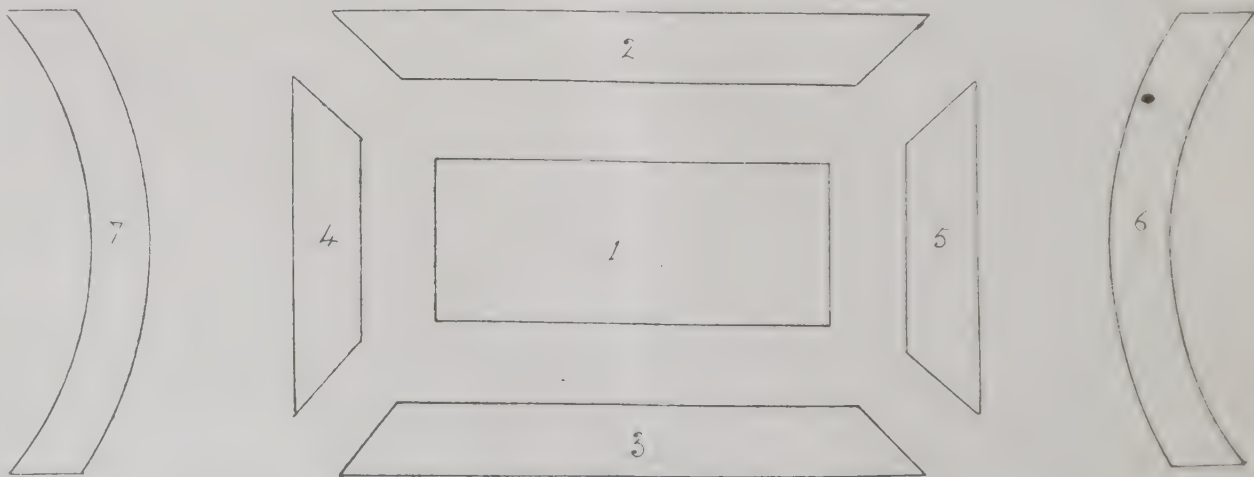


FIG. 2.—(1) 24 FEET \times 9 FEET; (2 AND 3) 34 FEET \times 4 FEET 6 INCHES; (4 AND 5) 18 FEET 6 INCHES \times 4 FEET 6 INCHES; (6 AND 7) 33 FEET \times 4 FEET 6 INCHES.

pegs as shown in Fig. 1. Planting is begun in the centre and planted zigzag as shown. In planting the bulbs in the last row each side, they are continued round the ends between the plants.

Some Excellent Arrangements.—The following are some of the arrangements of plants and bulbs in the oblong and circular beds, as shown in Fig. 1:

1. Aubrietia Hendersonii, two rows of white

Daisies, early Tulip Ophir d'Or and May-flowering Tulip Bouton d'Or.

2. Aubrietia Model, two rows of *Alyssum saxatile compactum*, early Tulip Princess Marianne, and May-flowering Tulip Picotee. Other Tulips which may be used are Yellow Prince (early) and *gesneriana lutea* (May-flowering).

3. Double Arabis, two rows of Aubrietia Model or Dr. Mules, early Tulip Thomas Moore and May-flowering Tulip La Merveille. Other Tulips: Dusart, Mr. Stanley or Prince of Austria (early), and *macrospeila*, *gesneriana rosea* and *g. major* (May-flowering).

4. Polyanthuses (yellow or white), two rows of crimson Polyanthuses or two rows of pink Daisies, early Tulip President Lincoln and May-flowering Tulip Blushing Bride. Other Tulips: Eleanor (early) and Inglescombe Pink (May-flowering).

5. Pansies or Violas mixed (two rows of white or two rows of yellow), early Tulip Keizerskroon and May-flowering Tulip Royal Crown.

6. Giant White Daisies and two rows of Aubrietia Dr. Mules. Tulips as in No. 3.

7. Myosotis Royal Blue, two rows of *Alyssum saxatile compactum* or two rows of Giant White Daisy. Tulips as in Nos. 1 and 2.

8. Wallflowers (dark) and two rows of yellow, cream or white *Narcissus Poeticus ornatus* or *N. Poetaz Elvira*.

9. Wallflowers (yellow, cream or white), two rows of dark Wallflowers or two rows of Myosotis Royal Blue and Tulip *gesneriana rosea* or *g. major*.

The foregoing, I think, gives a fair idea of how the beds may be planted. In Fig. 2 I give particulars of a portion of the beds in another garden and a description of how they were planted one season.

1. Wallflowers (dark), two rows of double Arabis and *Narcissus Poeticus ornatus*.

2 and 3. Polyanthuses (mixed), one row of yellow Polyanthuses, early Tulip Artus and May-flowering Tulip Blushing Bride.

4 and 5. Polyanthuses (crimson), one row of white Polyanthuses, early Tulip Ophir d'Or and May-flowering Tulip Bouton d'Or.

6 and 7. *Erysimum Golden Gem*, one row of Aubrietia Model, early Tulip Mr. Stanley and

May-flowering Tulip Inglescombe Pink. The *Erysimum* is a good spring bedding plant, flowering earlier than the Wallflower, and I grow it the same as described for the Wallflowers.

I could give many other ideas for planting beds and borders, but the foregoing I consider sufficient to guide anyone interested in the subject.

J. B. STEVENSON.

Chine Cottage, Bournemouth.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

The Early Vinery.—If ripe Grapes are required in May, this should be shut up during the first week of November and started with a night temperature of 55°. Maintain a moist atmosphere by frequently syringing the walls and floor of the house, and the Vines will benefit by a light damping when the weather is bright. When the buds begin to swell, the night temperature must be raised to 60°. The border should be examined and, if dry, thoroughly moistened with clear soft water at a temperature of 70°.

Early Figs in Pots.—These should be placed under cover at once. Examine the crocks of each pot, and give a surface-dressing of loam and decayed manure. This must be made firm, leaving sufficient space for a liberal supply of water.

Strawberry Plants for Forcing.—Careful attention will be necessary with regard to watering these plants. If dry weather continues, the roots must not be allowed to suffer for the want of water. On the other hand, if heavy rain sets in, the plants will require the protection of a cold frame, especially those plants for early forcing.

Plants Under Glass.

Roses in Pots which have been grown in the open during the summer should now be removed to some sheltered position where the pots can be protected from frost in the winter. If a few early blooms are desired, a limited number of plants may be placed in gentle heat now, but previous to this the drainage should be examined and the pots washed, after which a top-dressing of rich loam and decayed cow-manure may be given.

Violets in Pits.—Abundance of air should be given to Violet plants in pits; in fact, they will benefit by the removal of the lights during mild weather. If the soil is at all dry, a thorough watering ought to be given before it is necessary to close the pits at night. Nothing is more detrimental to Violets during the winter than a close, stagnant atmosphere.

Achimenes and Caladiums.—The pots containing these tubers should now be laid on their sides under the stage of a warm house, where they may remain during the winter.

Palms.—Now that the pots are well filled with roots, an occasional watering of liquid manure may be given. Take advantage of dull days to sponge the foliage, and if scale or other insects are present, some approved insecticide should be employed to destroy them. Syringe the plants freely during bright weather. Very little shading or airing will be necessary now, providing the atmosphere is kept sufficiently moist.

The Flower Garden.

Spanish Irises and late-flowering Tulips should be planted at once if not already done. The soil for this purpose must be rich and deeply cultivated if the best results are to be obtained. Old clumps of these bulbs should be lifted before growth commences, and the soil enriched by a good dressing of old manure from the Mushroom-house or a spent hot-bed. Deep cultivation is of more importance than many people think.

Violas.—If the old plants have been cut back in the autumn, numerous young shoots should now be ready for propagation. If carefully removed from the old stools and inserted in sandy soil quite near the glass in a cold frame, they will soon make roots. Keep the pit closed until growth commences, after which the lights must be removed until sharp frost sets in. By this means good, strong plants will be ready to put out in March.

Antirrhinums.—Cuttings of the best varieties may still be taken and inserted in pans or boxes with a view to retaining distinct colours for early summer blooming. In selecting the cuttings, only such as are without flower-buds ought to be taken. The soil should be freely mixed with sharp silver sand.

The Rock Garden.

Plumbago Larpentæ.—This is a very desirable plant for the rock garden. In September it is covered with beautiful blue flowers, and lasts so until the end of October, or later if the weather is mild. In all cases it is desirable to plant in a sunny position, either above the upper edges of vertical stones on the rockwork or on a sunny bank. Sandy loam is the most suitable soil for it. The stock may be increased by division either after flowering or in the spring.

Hardy Fruit.

The Fruit-Room.—There must be no lack of attention in the fruit-room for the next two months. Give just sufficient air to carry off the moisture, but nothing more at present, for a strong current of air is almost sure to cause early fruits to shrivel. Examine the fruits twice weekly, and remove all which show signs of decay.

Wall Trees.—While the weather is favourable the planting of wall trees should be pushed forward as quickly as possible. See that the soil is thoroughly drained and of such a nature as will promote the growth of clean, healthy trees. If young, home-grown trees are available, they may be lifted and transplanted with a good ball of soil, with a fair prospect of carrying a few fruits next season. In the case of Apricots and Cherries, a good quantity of old lime rubble ought to be mixed with the soil, especially if this is of a heavy nature.

The Kitchen Garden.

Leeks.—The main crop of Leeks should be given frequent waterings of liquid manure. Few garden crops will repay the cultivator better for liberal treatment in this way than the Leek, which is a gross feeder, and the larger the specimen the better will be the flavour.

Winter Spinach.—All decaying leaves must be removed as they appear and the soil between the rows moved with a Dutch hoe. A slight sprinkling of soot should be applied to promote healthy growth and keep slugs in check.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Parsley.—To provide a constant supply of this indispensable garnishing during the winter requires somewhat more than ordinary attention bestowed on its cultivation. As has already been pointed out, the plants for this supply should now be safely under the protection of at least a cold frame. To give a constant supply it will be necessary to pick the Parsley fairly close and remove all decayed leaves from time to time. Where, however, a very limited supply is required, a few plants should be carefully lifted, potted into 6-inch pots, and placed in a cold frame or on a greenhouse shelf, where a useful picking may be had.

Cabbages.—To provide a supply to follow those that were planted towards the end of August, a few plants may still be planted in rows on ground that has recently been cleared of late Potatoes.

Herbs.—Although a number of these will have been cut and dried for winter use, they are poor substitutes for the fresh young leaves that can be obtained from plants that are forced. As Tarragon and Mint are the two most in demand, a few roots should be lifted, placed in boxes, and introduced into heat as required. In this connection it is important to remember that as they are moisture-loving plants, they must on no account be allowed to become dry at any time.

The Flower Garden.

Violas.—In many districts difficulty has been experienced in securing a sufficient number of cuttings of some of the best varieties. There need not, however, be any alarm in this respect, as with a good, healthy stock there is still time to make up the shortage. If each cutting taken now has a small portion of the root attached, it will quickly establish itself in a cold frame. Old roots should be run out into nursery lines,

and, if required, can be divided and planted in the spring.

Montbretias.—In many cases it is not necessary to lift and store Montbretia bulbs in the late autumn. Still, in the majority of places in the North it will be advisable to lift and store the bulbs as soon as the foliage dies down. Place them in boxes of sand and store in cold frames. During wet weather, or when outside work is at a standstill, the clumps should be divided, selecting the largest bulbs and replacing them again in boxes until planting-time in the spring. In the case of choice varieties, the small bulbs ought to be preserved and planted out in the reserve border, where by another season they should attain flowering size.

Plants Under Glass.

Freesias.—The earliest lot should now be sufficiently advanced to admit of the plants being gently forced; this must, of course, be done gradually. The shoots should be neatly staked and the plants kept as close to the glass as possible. As soon as the flower-buds appear, liquid manure may be given, or, failing that, some approved plant food.

Cyclamen.—Young plants from a sowing made in August should now be ready for pricking off. Prick these into shallow boxes about three inches apart, using a compost comprising loam, leaf-mould and good silver sand. The moving of the tiny plants must be carefully done, as the roots are easily damaged. These may, of course, be placed in small pots at once, but when boxes are used the plants seem to get away better. Place them near the glass in a temperature of about 60° and syringe lightly on fine days.

Richardias (Arums).—In order to have these in flower by Christmas, no time must be lost in putting a number of plants into heat. For this early flowering select plants that have not been turned out of their pots during the resting period, as it has been found that they force more readily than those that were planted out. As soon as growth advances they should be assisted with liquid manure or some good fertiliser.

Cinerarias.—After this date it will not be safe to let these remain in cold frames, unless, of course, they can be heated in some way. In any case perhaps it will be better to stand them in a cool, airy house where fire-heat is only turned on to exclude frost. In turning them over, make a close examination for leaf-grub and have it destroyed. The house must be fumigated at intervals to prevent an attack of green fly.

The Hardy Fruit Garden.

Gooseberry and Currant Cuttings.—Although young bushes of these can be bought for a very modest sum, it is sometimes advisable to have a stock of home-raised bushes. In the case of Gooseberries and Red and White Currants, the cuttings should be selected from straight, medium-sized growths, with a heel attached if possible; this, of course, is not necessary. Rub out the lower buds to prevent suckers appearing. These cuttings ought to be shortened somewhat and placed upright in a trench 6 inches deep, and when filling in the soil see that the ground is made very firm. In the case of Black Currants, the same treatment should be given, except that the buds must not be removed from the lower part of the shoot. With Black Currants suckers are to be encouraged.

Fruit Under Glass.

Figs.—Unless the roots of Fig trees are confined in a comparatively small space by means of brick walls, it is very difficult to keep them in a fruitful state. Trees that have made an abundance of growth usually produce a very poor crop of fruit. These should now be attended to, and in some cases drastic measures must be resorted to. Open a trench round the tree and as close to the trunk as can be done with safety. Fork out the soil from underneath, cutting back all strong roots going downwards and trimming any that may be damaged. Before proceeding to fill in the trench, ram some lime rubble or broken bricks underneath the ball to encourage surface rooting. In filling in the trench, use good loam and lime rubble, and on no account add manure to the soil.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Lælia pumila alba Orchid Dene Variety.—The pretty and pure white dwarf-growing variety bore a one-flowered scape perhaps not more than 4 inches to 5 inches high. The flower, however, was exceedingly pure in tone throughout, and very solid-looking. From Messrs. E. H. Davidson and Co., Twyford.

AWARDS OF MERIT.

Lælio-Cattleya Lady Oliphant (L.-C. Norba × Souv. de Queen Victoria).—A distinct and beautiful variety in which the sepals and petals are soft chrome yellow, the pronounced fringed lip being wholly coloured rosy crimson. From Pantia Ralli, Esq., Ashtead Park.

Carnation Wivelsfield White.—

This handsome variety has been exhibited on many occasions, though not hitherto presented for an award, the raisers preferring to first fully test its merits. It now figures among the indispensable market whites—no mean tribute to the excellence of a Carnation of any colour to-day. Wedded to purity of tone, informality and easy development is a fragrance that will render it popular in any collection. From Messrs. Allwood Brothers, Hayward's Heath.

Begonia Mrs. Harry Barton

(see illustration).—In specimen form, as shown, this is decorative and distinct in colour, the creamy-coloured flowers, profusely borne, extending in well-branched trusses. So far as we remember, nothing like it in the winter-flowering Begonias has appeared hitherto. It is said to be a sport from Emily Clibran. Exhibited by Miss Tanner, Caldecote Towers, Bushey Park, Herts.

Chrysanthemum James Stredwick.—

An exhibition Japanese variety of goodly proportions with drooping florets, and coloured a terra-cotta shade. The variety as shown displayed not a little refinement. From Messrs. J. Stredwick and Sons, St. Leonards-on-Sea.

Chrysanthemum W. Rigby.—

An exhibition Japanese variety of the incurved type. It is of massive proportions, without coarseness, and of a rich yellow colour. Handsome from the exhibitor's standpoint. Exhibited by the Rev. Canon Cooper Marsden, D.D., Bickley, Kent.

Dahlia Deveron.—A Collarette variety of rosy cerise tone and nearly white inner florets. It is exceedingly showy, and of a shade that shows well under artificial light. From Messrs. Dobbie and Co., Edinburgh.

NEW FRUIT.

Apple Harry Pring.—A culinary sort which received an award of merit when shown as

gathered fruits in February last, subject to it passing the cooking and cropping tests, and also that of habit of growth. These having proved satisfactory, the award has now been confirmed. No fruits were shown at this meeting. Exhibitor, Mr. Peters, Leatherhead.

All the foregoing were shown before the Royal Horticultural Society on the 20th inst., when the awards were made.

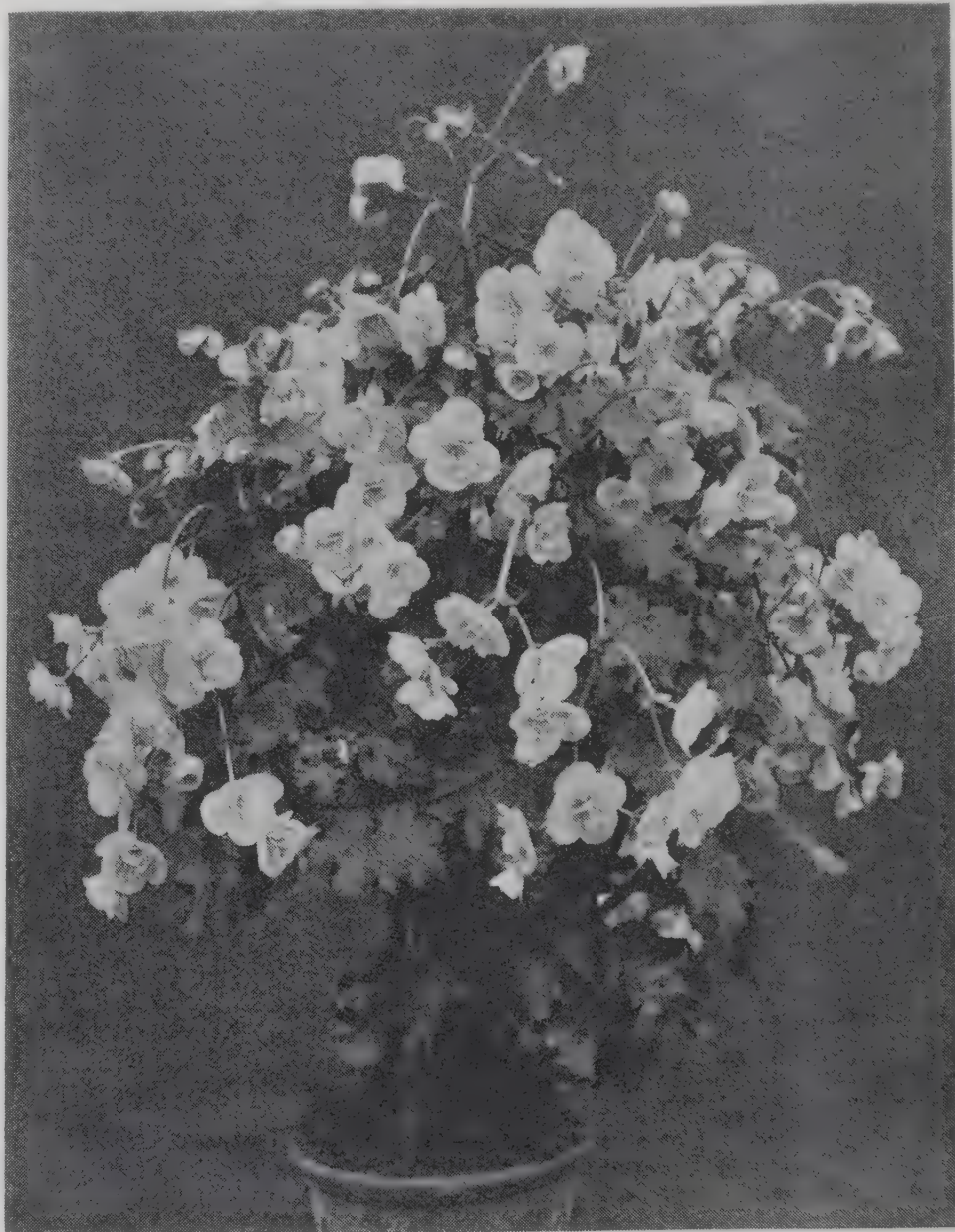
BOOKS.

Recent Investigations on Apple Scab.—

A large amount of literature has appeared dealing

browned. On the fruit almost black spots, becoming reddish brown and sharply bordered, are produced, the central part finally becoming brown, bare and corky, with a black margin. Cracking of the fruit occurs in many varieties. The disease also attacks the twigs, apparently rarely in America, more commonly in this country. McAlpine estimated the loss due to this disease in Victoria to amount to £40,000, and the author estimates the loss in the States, where there are over five million acres of Apples, at approximately nine million pounds sterling. Not only is the market value of the Apples diminished by the attack, but they are rendered smaller, and various rot-producing fungi attack them through the damaged spots. All the species of *Pyrus* of the

Apple group appear to be open to attack, including *Pyrus spectabilis*, *P. Kaido*, *P. floribunda*, *P. baccata*, *P. prunifolia*, *P. rivularis* and *P. dioica*, and the fungus can apparently pass from one species to another. The similar disease on the Pear is, however, produced by a different species of fungus, though very closely allied. The author gives a long and valuable account of the various stages through which the fungus pass, which we may pass over, and turn to the measures of control which he advocates. These consist of (1) sanitary measures, (2) selection of resistant varieties, and (3) spraying. The sanitary measures include the turning in of dead leaves and the pruning of the tree so as to keep it open. In addition, in England the cutting out of infected and dying shoots is important. Unfortunately, few varieties really worth growing are free from scab attack, so that selection of resistant varieties offers little hope of success in Apple-growing. Along with sanitary measures, spraying is important. Dust sprays can be employed with greater economy than liquid sprays; but, unfortunately, they do not appear to be effective in controlling the disease. Bordeaux mixture and lime-sulphur sprays seem the best, and considerable success has followed the addition of iron sulphate to the self-boiled lime-sulphur washes. The greatest importance attaches to the time of application. In the author's experience winter spraying has little effect, and he considers the best time for the first application of the spray to be just as the buds show pink. A second should be made as soon as the petals have fallen, and a third about a fortnight or three weeks after this. Sometimes another in July or August is called for. Rainy weather is the time when infection is most likely to occur, and a spray with more or less adhesive properties should be chosen so as to withstand some amount of washing without damage. These measures combined have proved very effective in the States in holding the disease in check.



THE NEW WINTER-FLOWERING BEGONIA MRS. HARRY BARTON
THE FLOWERS ARE CREAM COLOURED.

with Apple scab in all countries where the Apple crop is an important one, for, in all, scab ranks, just as it does here, as one of the worst troubles from which plants suffer. One of the latest contributions* to the subject is that of Mr. E. Wallace of the Cornell University, and it may not be inappropriate to summarise his remarks at this season, when scab is most evident. The symptoms of scab on the leaves are first an olive discoloration on the lower surface, which becomes darker and assumes a velvety appearance. On the upper surface the spots are at first lighter; later the tissue under the spot is often killed and

* Cornell Exp. Station, Ithaca, U.S.A., Bull. 335; September, 1913.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ANTIRRHINUMS DISEASED (Oak-leaf, British Columbia).—The Antirrhinums are attacked by the fungus *Puccinia antirrhine*. This fungus is unknown on this side of the Atlantic; but, judging from the reports that have appeared and from the specimen you send us, we think it must be a very virulent disease indeed. You have done quite right to destroy the affected plants, and as the disease is unknown here, we think it extremely probable that it has been contracted from wild plants growing in its neighbourhood. Not only are Antirrhinums attacked, but some species of *Linaria* too. As a precautionary measure we advise you to spray young plants with Bordeaux mixture or with potassium permanganate at intervals all through their growth. We think if you adopt this precaution you will avoid the attack another season.

ROSE GARDEN.

SELECTION OF RAMBLER ROSES FOR SEVEN-FOOT SCREEN (M. M. K. C.).—Your selection is, on the whole, a good one; but instead of Mme. Alfred Carrière, which grows so very rampantly, and is really more suitable for a lofty arch or wall, we would suggest *White Tausendschön* or *Lady Waterlow*; and as you have no good red, we recommend *Excelsa* in place of *Climbing Captain Christy*. The variety *Juliet* is not a bedding Rose, as it flowers sparsely in the autumn. It is best grown as a pillar or free bush, when it is very beautiful.

ROSE GROWTH FOR EXAMINATION (R. F. C.).—The piece of growth sent is that of the *De la Grifferaie* stock. This stock is used by some growers for Tea and Hybrid Tea Roses. It is a very good one in many respects, but its suckers are very troublesome, and not readily detected. It is also a bad stock for mildew. Often one may see this Rose flourishing upon a wall where some climbing variety has been planted. The original Rose has died, and this vigorous stock has taken its place, to the disgust of its owner. We remember reading in one of Dean Hole's books how some enthusiastic amateur took him to view a very vigorous plant of *Maréchal Niel*, but which had never blossomed. When the witty Dean saw the plant, he could understand the reason for its not flowering, because it was simply the *Manetti* stock, which rarely blossoms. If Roses are obtained on the *Briar* stock, their suckers are readily distinguished.

FRUIT GARDEN.

BEURRE DIEL PEARS CRACKING (M. F. A.).—Please see reply to "Down Place" in last week's issue.

FIG TREE DROPPING ITS FRUIT (Mrs. Craig).—The Fig tree has failed to develop and carry its fruit to maturity because the flowers of the fruit failed to set seeds. By cutting a fruit you will see that there are no live or hard seeds in it (this is a first essential to fertility in all fruits). The cause of this is generally attributed to the soft and immature condition of the wood of the previous year's growth (the shoot which produces the fruit). The

way to remedy this is by thinning out many of the branches of the previous year's growth at the winter pruning, especially the weak shoots and in parts where the tree may be overcrowded with them. This will expose the shoots left to more sunshine and air, causing the growth of the shoots of next year to be harder, better matured and more fertile. Your tree being raised from a sucker makes no difference.

KITCHEN GARDEN.

CELERY FOR INSPECTION (Colsoncott).—Your Celery is attacked by the fungus *Septoria Petroselinii* Apii, causing disease and death of the leaves and giving them the rusty appearance they exhibit. No cure is possible when the disease has assumed the proportions it has in this case, and the best that can be done is to pick off all the diseased parts and burn them, spraying the rest with Bordeaux mixture or with potassium sulphide (1oz. to three gallons of water). The disease is carried mostly in the seed, and next year care should be taken to procure seed from a good source.

POTATO ATTACKED BY BLACK SCAB DISEASE (B. H.).—We regret to say that the Potato you send is attacked by the disease called black scab, due to the fungus *Synchytrium endobioticum*. No cure is known, and when once the disease has attacked the plants the soil is almost certain to have become affected, and succeeding crops of Potatoes are liable to the same disease. You must notify the Board of Agriculture, 8, Whitehall Place, London, S.W., of the attack. A penalty is attached to concealment or failure to give the notification. It would be well to destroy by fire all the affected tubers, and either not to grow Potatoes in the affected land for eight years at least, or to grow only varieties not subject to attack, a list of which can be obtained from the Board of Agriculture.

MUSHROOMS IN FIELD OR GARDEN (Mushrooms).—Mushrooms planted in field or garden are always an uncertain crop, and one which can never be depended on to come true to time. One season there may be a heavy crop, whereas the next year there may be none at all. Your best way to secure a succession of supplies will be to plant with spawn the area you mention, both in field and garden. It is too late to plant the spawn in the natural ground out of doors now. The best time is the end of May. Break a brick of spawn into four pieces and plant each in the ground a foot apart, always just deep enough for the pieces of spawn to be covered over an inch deep. Cover over with loamy soil and tread down very firmly. In about a month after spawning, should the ground be dry and the weather warm (not otherwise), give the spawn a moderate watering, and look out for Mushrooms at the usual time in the autumn.

HOW TO USE CHICORY (Thames Valley).—Chicory is largely grown as a winter salad, for which purpose, mixed with Lettuce and other salad plants, it is excellent. At the end of October the roots may be dug up and stored out of doors in clumps with Potatoes, or, if preferred, they may be left in the ground through the winter (the plant is quite hardy) and the roots taken up in batches for forcing as required. The forcing of the roots usually commences at the end of October, and may be continued by planting successional batches throughout the winter (provided plenty of roots are available). Cut off all the lower half of the roots and plant the top parts close together in large pots or boxes of any sort of light soil, and place in some position which can be kept warm and dark, such as a Mushroom-house or underneath the stage of a glass house or a stove house (this could be darkened). In such a position the roots would soon be excited into leaf growth. (It is these leaves so forced which are used for salad.) They should be cut off when 6 inches long before they get too old, or they become bitter and flabby. The roots are of no further use after the leaves have been cut off. They should be thrown away and the soil replanted with new roots.

MISCELLANEOUS.

WIREWORMS EATING PLANTS (C. P. L.).—Your best plan will be to trap the wireworms as completely as possible by means of pieces of Potato or Carrot sunk in the ground. Constant hoeing and cultivation throughout the season is the best means of dealing with the pest, and the use of superphosphate has some effect in keeping it in check, or causing it to keep on the move.

VARIOUS QUESTIONS (A. Vaughan).—(1) The Celery is attacked by the fungus *Septoria Petroselinii* Apii. Please refer to reply to "Colsoncott." (2) The Beet is attacked by Beet rust, due to *Uromyces betæ*. It is not likely to make much difference at this season of the year, but it indicates the lack of potash in the soil, and we advise you to give a dressing of a potassium manure, such as potassium sulphate, before growing Beet in the soil again. (3) We can find no disease due to fungus or insect attack on the foliage of the Salsify sent.

MAKING A SHELTER (W. H. B.).—Seeing that the proposed site is sheltered on all but its north aspect, it would be quite easy to convert it into a shelter, though we fail to see what service it would be for such things as Dahlias, unless these were planted within it in spring. The laths you speak of would do well for the sides, and need not be closely fixed; an inch asunder would be better. This material would be rather heavy for the top, and tiffany, scrim or canvas would do quite well, as these keep out several degrees of frost. If you make the top span-roofed, after the manner of a small greenhouse, you might use Rush or Reed mats for the top, or the ordinary Russian or Archangel mats, either of which could be fixed at the ridge and be rolled up and down at will by the aid of a pulley, cord and roller. In all the circumstances,

however, we think the sides made of laths, and with canvas or tiffany for the roof, would meet your requirements and not obstruct too much light.

VARIOUS QUESTIONS (Bourne).—With the further particulars regarding your Pelargoniums, we still think that the gas is a very likely cause of the trouble. Besides this, there are undoubtedly errors in cultivation, for you speak of giving them a little water every day. As pointed out in our letter, this is the worst possible thing you could do, the correct course being to allow the soil to become dry (not parched), and then give a thorough watering, which is best accomplished by soaking in a pail of water and allowing them to drain before returning them to their place. In all probability the roots are in a sorry plight, and this would be considerably aggravated by the frequent doses of fertiliser, as stimulants should only be used on plants whose roots are in a good, healthy state, and able to derive nourishment therefrom. If you examine the roots of your plants you will very likely find them considerably decayed, in which case the best thing to do is to shake them clear of the old soil and repot in some good, sweet compost, such as loam lightened by a little leaf-mould and sand. Until the roots are active, watering must be very carefully carried out. Gas would not in any way injure plants in the open borders near the windows of the rooms where it is used, as, of course, the fumes are at once carried away by the outside air. There are no flowering plants that would not be affected by gas in the room in which they are growing, and we can only assume that, in the case of the windows full of beautiful flowering plants of which you have been told, they were grown elsewhere and taken indoors when at their best. The most successful gas-resisting foliage plants would include *Aspidistra*, *Aralia Sieboldii*, *Araucaria excelsa*, *Asparagus Sprengeri*, *Cyperus alternifolius*, *Cordyline australis*, and the hardier Palms such as *Corypha australis*, *Lantana borbonica* and the *Kentias*, providing they have been well exposed to light and air beforehand.

NAME OF PLANT.—W. Wright.—A common tropical and subtropical annual: *Setaria glauca*.

NAMES OF FRUIT.—Mrs. Wainwright.—1, *Beurré Superfin*; 2, *Josephine de Malines*; 3, *Easter Beurré*.—J. P.—1 and 3, *Marie Louise*; 2, *Beurré Dumont*; 4, *Comte de Lamy*; 5, *General Todleben*; 6, *Maréchal de la Cour*; 7, *Beurré Superfin*; 8, *Beurré Diel*.—Subscriber.—Bramley's Seedling (big one); Cox's Pomona (middle one); deformed fruit (small one).—W. S. Tillet.—Cox's Orange Pippin.—Jim.—1, *New Bess Pool*; 2, *Poor fruit of Cox's Orange Pippin*; 3, *Emily Childs*; 4, *Rosemary Russet*; 5, *Emperor Alexander*; 6, *Allington Pippin*; 7, *Tyler's Kernel*; 8, *Beurré Hardy*.—W. F. M. Copeland.—1, *Swan's Egg*; 2, *White Doyenné*; 3, *Pear Belle Julie*; 4, *Apple Chatley's Kernel*.—E. S. W.—*Pear Marie Louise*.—Gosden.—Pears: 1, *Marie Louise*; 2, *Beurré Diel*; 3, *Duchesse d'Angoulême*; 4, *Catillac*. Apples: 1, *Allington Pippin*; 2, *Ashmead's Kernel*; 3, *Yellow Ingestre*; 4, *Sugarloaf*; 5, *Calville Rouge*; 6, *Hall Door*; 7 and 8, *Newton Wonder*.

OBITUARY.

CHARLES BECKETT.

WE regret to record the death of this noted gardener, which occurred at The Rosary, Boreham Wood, Elstree, on the 17th inst. The deceased, who was in his eighty-ninth year, was for twenty-five years gardener at Remenham Lodge, Henley-on-Thames, and at that time was a very successful exhibitor at the local shows. Subsequently, and for about a similar period, he was bailiff to the late, and also to the present, Sir Philip F. Rose, Bart., at Rayners, Penn, Bucks, a position from which he retired about eleven years ago. For the past two years his health had been failing, but the end came rather suddenly, the deceased having visited his garden and gathered some Roses a short time previously. He leaves three sons, all of whom are well known in horticultural circles, viz., Mr. Edwin Beckett, V.M.H., head-gardener at Aldenham House, Elstree; Mr. Charles Beckett, head-gardener at Chilton, Hungerford; and Mr. Thomas Beckett, steward at Havering Park Farm, Romford.

FREDERICK PHIPPEN.

His many friends will regret to hear of the death of Mr. Frederick Phippen, which occurred on the 20th inst., from pneumonia, after a week's illness. Mr. Phippen, who was thirty-one years of age, had for many years represented Messrs. Jarman and Co. at the principal shows in the country. His bright, genial disposition attracted a large circle of friends. The funeral took place at Chard on Saturday, the 24th inst.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

AN exhibition of some variety and excellence was brought together on the 20th inst., the show being in the nature of a surprise. Its outstanding feature was the remarkable collections of British-grown fruit, five leading firms bringing of their best. Of its quality generally, the subjoined report will afford a good idea, though its high excellence is demonstrated by the fact that one gold Hogg medal, three gold medals and two silver Knightian medals—one for Grapes—were awarded. For the rest the double table group of winter-flowering Begonias from Messrs. Veitch, obviously—in view of the impending sale—the last of these from this eminent firm, showed these plants to perfection. Michaelmas Daisies from Lewisham have never been more finely or artistically displayed, while Carnations and Roses were also good. Only one or two Orchid groups were staged. The Orchid committee gave awards to two, and the floral committee to five, novelties, the fruit committee confirming an award of merit, after the usual tests of cooking and cropping, to a culinary Apple certificated in February last.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), Sir Harry J. Veitch, and Messrs. James O'Brien, W. Bolton, A. Dye, Gurney Wilson, E. H. Davidson, W. P. Bound, H. G. Alexander, J. E. Shill, C. H. Curtis, W. H. Hatcher, J. Charlesworth, J. Cypher, W. Cobb, F. J. Hanbury, R. A. Rolfe, C. J. Lucas, A. McBean, T. Armstrong, S. W. Flory, G. Hunter and Stuart H. Low.

Messrs. Charlesworth and Co., Hayward's Heath, Sussex, contributed a nice group, which comprised excellent varieties of *Odontoglossum crispum*, *Cattleya labiata* alba var. *Penelope*, *Dendrobium formosum giganteum* (very fine) and *D. Dearei* (both white-flowered sorts), *Brasso-Cattleya* Queen Alexandra, B.-C. *Moneta* (of rosy mauve colouring), *Cattleya Ena* (orange sepals and crimson lip) and *Lælio-Cattleya Elinor* (a very beautiful variety of rich orange tone).

T. J. Finnie, Esq., Claygate, showed a well-flowered example of *Cattleya labiata* with eight scapes of flowers, the plant making a fine show.

Messrs. J. and A. McBean, Cooksbridge, Sussex, showed *Cattleyas* in variety, *Odontiodas*, *Dendrobium Phalaenopsis*, *Lælio-Cattleya Cooperi* and *Cypripedium Rosettea*.

In a compact group from Messrs. Sander and Sons, St. Albans, we noted *Lælio-Cattleya Ophir* (rich golden yellow), *Cattleya Mantinii*, *C. Fabia* alba var. *Rex*, *C. Adula* var. *Aurora* and the very distinct *Coclogyne mooreana*, whose large white, yellow-lipped blossoms are borne on 18-inch-long stems. It is highly ornamental and beautiful.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. W. A. Binney, E. A. Bowles, J. Green, F. W. Harvey, W. J. Bean, W. Howe, G. Reuthe, J. W. Moorman, C. R. Fielder, J. F. McLeod, T. Stevenson, R. W. Wallace, R. C. Notcutt, J. Jennings, H. J. Jones, J. Dickson, C. Dixon, C. E. Pearson, W. Cuthbertson, J. T. Bennett-Poß, W. P. Thomson, E. H. Jenkins, W. G. Baker, A. Turner and G. Paul.

Messrs. James Veitch and Sons, Limited, Chelsea, displayed—positively for the last time—one of the finest groups of winter-flowering Begonias ever staged, even by this eminent firm. The group comprised a double table of these now indispensable subjects—indispensable from the standpoints of beauty, decorative value and winter flowering—and afforded a good idea of the work that has been accomplished in one direction of winter-flowering plants alone. Next to good spectacular display, excellence of culture commanded attention, and this at least is not likely to be surpassed. The varieties were not numerous, but they were good throughout. Of these, *Elatior*, reddish carmine, compact, free-flowering and brilliant in colour, was one of the best. *Exquisite*, salmon, white base; *Emita*, orange scarlet, large and free; *Optima*, pale orange, free and graceful, a fine decorative plant; *Mrs. Heal*, one of the best of the earlier sorts; *Fascination*, a compact-growing, orange-flowered *Optima*; and *The Gem*, a rich carmine crimson which in effect surpasses the earlier *Elatior*, were also included. The *Gem* is a remarkable plant, full of flower and bud, submitting to small pot culture, and therefore destined for a wide sphere of usefulness.

Messrs. W. Cutbush and Sons, Highgate, N., displayed *Liliums* grown from retarded bulbs, also *Hydrangeas*, soft-wooded *Heaths*, such as *Erica gracilis* and *E. nivalis*, whose crowd of snow white bells were very charming.

Mr. Elisha J. Hicks, Twyford, Berks, showed the new Hybrid Tea Rose Mrs. George Norwood, a variety remarkable for its fine perfume as well as good pink colour. Princess Mary (single crimson) was also fine.

Mr. James Box, Hayward's Heath, showed a nice group of *Asters*, particularly of the *Amellus* race, A. A. Framfield being very fine. *Erigeron Quakeress*, *Lobelia cardinalis*, *Cimicifuga simplex*, *Hippophaë rhamnoides*, *Aster Climax* and *Pernettya mucronata* alba were all good and showy.

Mr. L. R. Russell, Richmond, displayed Tree and other *Ivies* together, *Aucuba vera*, *Crataegus Pyracantha* *Lelandii*, *Clematises* of sorts, *Eurya latifolia* variegata and *Bamboos*.

Messrs. Barr and Sons, Covent Garden, W.C., contributed a nice lot of early flowering *Chrysanthemums*, also *Cyclamen cilicicum*, *C. neapolitanum*, *C. n. album*, together with such *Crocus* species as *nudiflorus longiflorus*,

zonatus, *speciosus*, *atlanticus* and *Hadriaticus*. These were very charming. New hybrid *Nerines* were in considerable variety and constituted a pretty feature. *Cornus canadensis* and *Schizostylis coccinea* were very good.

Messrs. Dobbie and Co., Edinburgh, showed *Collarette* *Dahlias* particularly finely, some from seeds sown in March and others from plants grown in the usual way. The whole afforded considerable variety and much colour beauty. *Balmoral* (deep cerise purple), *Eddystone* (scarlet), *Maidens* (yellow), *Diadem* (rosy mauve) and *Deveron* (rosy cerise and white collar) were all very fine.

Mr. G. Reuthe, Keston, Kent, had an interesting lot of bulbous plants, alpine and shrubs. Of the former, *Tropæolum tuberosum*, *Colchicum Parkinsonii*, *Crocus Hadriaticus*, *C. marathoniensis*, *C. zonatus* and *C. Clusii* were very beautiful. *Nerines* made a particularly good show, and *Helianthus orgyalis* was very good. A number of alpine were also shown.

Mr. J. J. Kettle, Corfe Mullen, near Wimborne, Dorset, had a display of *Violets La France*, Princess of Wales and *Ascania*, the latter a widely open flower of some distinctness.

Messrs. W. Wells, Limited, Merstham, showed early and exhibition *Chrysanthemums*, the former including Dorothy Dann (single bronze), Joan Edwards (amaranth), and Mrs. J. Fielding (bronze). Carnations Pink Sensation and Champion were also shown.

The Misses Hopkins, Shepperton-on-Thames, had a small group of alpine, such as *Primulas*, *Polygonum vacciniifolium*, *Convolvulus Cneorum*, *Plumbago Larpenæ* and others. *Viola Bowles* Black and other miniature sorts were also shown.

The Misses Price and Fyfe, East Grinstead, displayed Carnations and early and other *Chrysanthemums*. The Carnations were in some variety.

Mr. W. Wells, jun., Merstham, had a grouping of Michaelmas Daisies and *Phloxes*. *Aster cordifolius elegans* and *Phlox Iris* were both good.

Mr. Clarence Elliott, Stevenage, showed flowers of *Gentiana acaulis*, boxes of *Crocus speciosus*, *Potentilla willmottiana*, *Thymus carnosus*, *Achillea tomentosa* and *Phlox subulata Vivid*, all in good flower and several quite out of season.

Messrs. H. J. Jones, Limited, Lewisham, had a superbly arranged table of Michaelmas Daisies and *Chrysanthemums*, the vases and stands being handsome in the extreme. Of the former, Magnet, Henry Adams and Climax, in shades of light and dark blue, represented the best of the tallest of these at this season. *Sirius* (rose), *Mrs. Henage* (blue) and *Mrs. J. K. Holmes* (pink) were also good. Of the large-flowered *Chrysanthemums*, Bob Pulling (rich yellow), Mile. Elise Dorden, Betty Spark (pink) and Cranford Yellow were all excellent. A splendid group, artistically arranged.

Mr. Amos Perry, Enfield, showed hardy Ferns, in reality a collection of *Scolopendriums* representative of the many phases and variations of this remarkable tribe. It was perhaps one of the most representative collections ever staged.

Messrs. Stuart Low and Co., Enfield, had some nice groups of Carnations, of which Enchantress Supreme, Salmon King, Gorgeous, Mrs. Mackay Edgar (good shapely pink), Princess Dagmar (crimson) and Satin Robe were some of the more important.

Messrs. Allwood Brothers, Hayward's Heath, showed Carnations very finely, such as Champion, Princess Dagmar, Wivelsfield White, May Day and Salmon Enchantress being very fine.

A big stand of *Dahlias*, representative of all sections of the flower, was shown by Mr. W. Treseder, Cardiff.

Roses from Messrs. B. R. Cant, Colchester, included Comtesse du Cayla, Duchess of Wellington, Gottfried Keller, Lyon Rose, White Maman Cochet, Irish Elegance, Snow Queen, Augustus Hartman, Lady Hillingdon and Rayon d'Or. A superb gathering of these popular flowers.

Excellent Carnations were arranged by Mr. C. Engelmann, White Enchantress, Enchantress Supreme, Scarlet Carola, White Wonder and Lady Northcliffe all being good. Triumph and Elektra were also noted.

Messrs. H. B. May and Sons, Edmonton, displayed Begonias, Bouvardias, Crotons, Ferns, Statice and Cyclamen. A grand specimen of *Drynaria quercifolia* was in the centre of a fine group.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. W. Bates, J. W. Willard, W. Pope, H. Markham, Owen Thomas, H. J. Wright, A. Bullock, Thomas Coomber, G. Wythes, E. A. Bunyard, J. Harrison, G. G. A. Nix, F. G. Treseder and A. R. Allan.

There were several magnificent collections of fruit staged, and the fact that one gold Hogg medal and three gold medals were awarded proclaimed their excellence. Indeed, it is not too much to say that finer produce has only rarely, if ever, been staged.

The most extensive collection was that from Messrs. George Bunyard and Co., Maidstone, this occupying a table running the entire length of the hall on its northern side. Some 200 varieties of Apples and Pears were staged by this well-known firm, the fruits being generally of high excellence, though we incline to the view that Messrs. Bunyard have staged examples which exhibited better finish and finer colour. Some of the Pears were of huge size; one fruit of Pear Marie Benoist was said to weigh 2½ lb. Of this variety a dozen giant fruits were arranged. Other fine varieties included Beurré Diel, Belle de Arbrès, Uvedale's St. Germain, Beurré Baltet Père—a basket contained a dozen giants of high merit—Catillac, Directeur Hardy and Durondeau. Of Apples of more than ordinary merit we selected Egremont Russet, McIndoe's Russet, Norfolk Beauty (of pale yellow colour), Emperor Alexander, Mère du Ménage (very large), Cox's Orange Pippin, Charles

Ross, Rev. W. Wilks, Brownlee's Russet, Bramley's Seedling, Lane's Prince Albert (a very nice dish), Cellini Pippin and Allington Pippin. Gold Hogg medal.

Messrs. Cannell and Sons, Eynsford, Kent, arranged a particularly attractive and highly meritorious collection of 146 varieties of Apples and Pears, the whole remarkable for size, finish and high cultural excellence. Indeed, not a few of the examples were of outstanding merit and were greatly admired. Of Apples we noted Bietigheimer Red, Baron Wolseley, Blue Pearmain (carrying a Grape-like bloom on its fruits, which was distinctly ornamental), Norfolk Beauty (perhaps the finest of the yellow-skinned varieties), Annie Elizabeth, Gascoyne's Seedling, Wellington (a superb lot) and Beauty of Kent. In addition, the best known sorts—Bramley's Seedling, Peasgood's Nonsuch, Cox's Orange Pippin, Ribston and others—were very fine. The best dishes of Pears were those of Conference, Doyenné du Comice, Beurré Bosc, Duchesse d'Angoulême, Princess, Pitmaston Duchess, Late Orange and Beurré Diel. Gold medal.

Messrs. J. Cheal and Sons, Crawley, set up a very attractive collection of 125 dishes of Apples and Pears, and here, too, high cultural merit, colour and good finish dominated the whole. We were impressed with the refined look of the fruits in this collection, the whole being well presented. The best examples of Apples were Lane's Prince Albert, Egremont Russet, Allington Pippin, Gascoyne's Scarlet (very striking), Golden Noble, Royal Jubilee, Sandringham, Crawley Beauty, Brownlee's Russet, Blenheim Orange, Beauty of Stoke, Stirling Castle, The Queen, Beauty of Kent, Newton Wonder and Cox's Orange Pippin. The finer dishes of Pears were Doyenné du Comice, Conference, General Todleben, Beurré Alexandre Lucas and Beurré Clairgeau, the whole making a highly attractive exhibit. Gold medal.

The other gold medal collection came from Mr. R. C. Notcutt, Woodbridge, who also arranged a somewhat extensive table of fruits. These latter were generally of large size; and while for the most part more finely coloured than was the case in some of the other collections, there was lacking that degree of finish so conspicuous elsewhere. There were, however, many handsome dishes. Of Pears, perhaps the more striking were Doyenné du Comice, Louise Bonne of Jersey, Duchesse d'Angoulême, Beurré Bosc, Pitmaston Duchess, Beurré Superfin and Winter Nelis; of Apples, Charles Ross, Royal Jubilee, Worcester Pearmain, Chelmsford Wonder, Bismarck, Lane's Prince Albert, Newton Wonder, Allington Pippin, Frogmore Prolific, and Hollandbury, which was very finely coloured.

Messrs. J. Carter and Co., Raynes Park, S.W., received a silver Banksian medal for a collection of pot-grown Capsicums, some of which were of a highly ornamental character. Perhaps the more striking was Elephant's Trunk, of rich red colour, the huge pendent fruits being very attractive. Others were Golden Dawn, Celestial (red, erect fruits), Long Yellow (with tapering yellow fruits) and Sweet Spanish (whose big, drooping fruits are coloured a glossy reddish scarlet).

Charles Bayer, Esq., Tewkesbury Lodge, Forest Hill, received a silver Knightian medal for a collection of Grapes, the varieties including Gros Colmar, Muscat of Alexandria, Appley Towers, Black Alicante and Chasselas Napoleon, several bunches of each being staged.

Messrs. Laxton Brothers, Bedford, were also the recipients of a silver Knightian medal for a capital collection of Apples displayed in a most artistic manner. The collection was less extensive than some, yet it served by branched stands and in other ways to demonstrate the ornamental as well as the utilitarian value of these fruits, the whole of which were in the highest perfection. Varieties, too, were numerous and good, though we considered such as Newton Wonder, Lane's Prince Albert, Cox's Orange Pippin, Charles Ross, Rival, Bramley's Seedling and Ribston Pippin of outstanding merit and beauty.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the floral committee was held in the Essex Hall, Essex Street, Strand, on Monday, the 19th inst., when a few varieties only were staged for awards. Those that received recognition from the committee were as follow:

Dorothy.—A medium-sized yellow reflexed Japanese variety with broad florets and good substance. The colour is very rich. Should prove a good market variety. Shown by Mr. Norman Davis, Framfield, Sussex. First-class certificate.

Elfrida.—A large and beautifully shaped single, the broad florets overlapping each other well. The colour is a sort of reddish bronzy yellow, with old gold shading towards the tips of the petals. Shown by Messrs. Cragg, Harrison and Cragg, Heston. First-class certificate.

James Stredwick.—A very large reflexed Japanese, the blooms showing a wonderful depth. The colour is a pleasing deep shade of old rose with a suspicion of crimson in the centre. Shown by Messrs. J. Stredwick and Sons, St. Leonards. First-class certificate.

Earl Roberts.—A large Japanese variety with broad, reflexed petals. The colour of these is bright rich crimson with gold reverse. Shown by Mr. G. Mileham, Evelyn House Gardens, Leatherhead. Award for colour.

A splendid collection of well-finished Grapes was shown by Mr. E. C. Wickens, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill. These comprised fine bunches of Chasselas Napoleon, Appley Towers, Black Alicante, Muscat of Alexandria and Gros Colmar. A silver-gilt medal was awarded this excellent exhibit.

THE GARDEN.

No. 2242.—VOL. LXXVIII.

NOVEMBER 7, 1914.

NOTES OF THE WEEK.

Help for Our Wounded Soldiers.—In these days, when it is the duty of every British citizen to make some sacrifice on behalf of the Empire, many calls are made upon the purses of those who are unable to take an active part in the conflict. One of the most deserving of these calls is now made by the Ambulance Department of the Order of St. John of Jerusalem in England. A special committee of ladies of the Order has been formed, and they are now appealing for shilling subscriptions to enable them to carry on their work of relief. Already 150 hospitals and convalescent homes have been established, 209 doctors and nurses have been sent to the Front, numerous bales of medical stores and supplies have been sent to the sick and wounded, and a number of motor ambulances are now being despatched to the Front. We appeal to our readers to subscribe as liberally as they can to the funds, and so help to relieve the sufferings of our soldiers who have been wounded while fighting for them. All subscriptions should be sent to the secretary, Ambulance Department, Marconi House, Strand, London, W.C. Ladies willing to collect shillings should send in their names to that address.

A Good Shrub for Sandy Soil.—The illustration on this page represents a flowering spray of *Cistus Loretii*, one of the most beautiful of all the Rock Roses and a shrub that will thrive in sandy soil. This *Cistus* is of hybrid origin, its parents being *C. ladaniferus maculatus* and *C. monspeliensis*. It grows very quickly, and eventually forms a graceful, spreading bush 5 feet or more high. Its flowers, which are produced with great freedom towards the end of the summer, are pure white, with a deep crimson maroon blotch at the base of each petal. Although individual flowers last only one day, a large number open each morning, and so maintain the display. In nurseries *C. Loretii* is often known as *C. cyprius*. It may be planted at any time during November or early December, or during February and the first week or two of March.

Aquilegas in Pots.—The hybrid Columbines are among the most ornamental and decorative plants for beds and borders, but seldom does one see them used for decorating the greenhouse in the spring. The largest crowns should be carefully lifted now and transferred to pots of a suitable

growth re-commences in the spring they should be brought into a warm house to flower. Their value as cut flowers needs no mentioning, and in pots, mixed with light foliage plants, they will be found equally as serviceable.

Sir David Prain's Son Killed in Action.—It was with deep regret that we noted the name of Lieutenant T. Prain of the Leicestershire Regiment among the list of officers killed in action that was published on October 30. Lieutenant

form of enquiry which is being sent out from there with a view to obtaining more definite particulars about American Gooseberry mildew. Twelve simple questions are asked on the form, answers to which are to be filled in and the form returned to the Director at Wisley. Professor Keeble will be glad if all growers who fail to receive one of these forms will communicate with him at the Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey.

Seedlings of the Willow.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. Fraser remarked that it had been reported that Willow seed rarely or never germinates, but he produced considerable evidence in the form of seedlings to show the contrary was the case. A constant supply of moisture and the absence of competition with tall herbaceous plants are necessary to the success of the young Willow seedlings, but given these conditions the seed germinates readily when fresh. He had found seedlings of *Salix repens* (which will germinate within forty-eight hours of sowing), *S. alba*, *S. viminalis*, *S. Lapponum*, *S. Caprea*, *S. cinerea*, *S. aurita*, *S. nigricans*, *S. phylicifolia*, *S. Arbuscula* and *S. lanata*. He showed beautifully dried specimens of all but the last of these.

Mr. Leonard Sutton, who has been selected for the coming year as Mayor of the Borough of Reading, is the youngest son of the late Mr. Martin Hope Sutton and the second senior partner of the firm of Sutton and Sons, Reading. He was born in 1863 and was educated at Wellington College and the Royal Agricultural College, Cirencester. Mr. Sutton is a Fellow of the Linnean Society, and has been closely connected with agricultural education since leaving Cirencester. He has been for some years chairman of the Reading Education Committee, and is also a



A FLOWERING SHOOT OF *CISTUS LORETII*, A GOOD SHRUB FOR SANDY SOIL.

Prain was, we understand, the only child of Lieutenant-Colonel Sir David Prain, I.M.S., C.M.G., F.R.S., &c., Director of the Royal Botanic Gardens, Kew, and we feel sure that the sympathies of all our readers, and Kewites in particular, will be extended to Sir David and Lady Prain in their great bereavement.

Wisley, and American Gooseberry Mildew.—Professor Keeble, Director of the Royal Horticultural Society's Gardens at Wisley, sends us a

member of the Council of the Reading University College, being chairman of its Advisory Farm Committee, and was appointed by the college as a member of the deputation to visit agricultural colleges in the United States and Canada in 1910. Mr. Sutton is a member of the Berkshire County Association. He has two sons serving as second lieutenants with His Majesty's Forces in the Berkshire Yeomanry and the Royal Sussex Regiment (7th Battalion)

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Gardeners and the Army.—Having received numerous enquiries as to the procedure gardeners have to take with their State Insurance cards on their enlistment in His Majesty's Forces during the war, I have appended a few instructions for the benefit of your readers who may wish to know how to proceed on enlistment. They should procure their insurance cards from their employers, stamped to the date of leaving their employment only, and send them to their respective societies. By doing this they will be entitled, on discharge to civilian life, to full benefits under the Act. Gardeners while serving in the Navy or Army will be known as B Class, and pay a contribution of 3d. per week, of which 1½d. will

Double-Flowered Peach Fruiting.—In answer to Mr. Turner's question, my flowering Peach is the pink one.—G. E. JEANS.

Moss on Tennis Court.—Will anyone advise how to destroy moss on a sand court and prevent its recurrence? Weed-killer has been tried without success.—G. J.

Buddleia Colvillei Flowering in Autumn.—In compliance with your request for information as to *Buddleia Colvillei* flowering now, there is a fine plant of it in this neighbourhood in flower, the first time it has given second blooms. The late Mr. W. E. Gumbleton had it for a great many years, but it hardly ever gave a bloom at any season, for its very vigorous growth was badly ripened and never pruned in any way, to which I attribute its barren condition. It has never suffered from frost in the garden I refer to, and bloomed a short time after it was planted.—(Captain) J. H. POE, D.L., *Riverston, Nenagh*.



A FINE SPECIMEN OF THE MEXICAN ORANGE (*CHOISYA TERNATA*) AT THE CEDARS, HALSTEAD, ESSEX.

be deducted from their pay. They still remain members of their societies, and on their return to civil employment their cards will again be stamped with 7d. stamps.—A. C. HILL, *Secretary of the United Horticultural Benefit and Provident Society*.

Late Sowing of Hardy Annuals.—Owing to the extreme dryness of the weather in June this year, I kept back seedlings of Ten-week Stocks in pots which were not sown until May, and did not plant them until July, when we had some showers. These plants began to bloom in August and have gone on till now, growing more vigorously and flowering far better than I ever saw them earlier in the summer. So many gardens look bare and shabby in August that I wonder more is not done with late-sown annuals to brighten up patches of ground in the borders where early seedlings have gone out of flower.—F. H. CASE, *Bishop's Waltham*.

Quince Jelly.—With the heavy crop of Quinces this year, a pleasant way of utilising them is to convert them into jelly, which is quite a simple process. Peel, core and slice the fruit into small pieces. Boil for two and a-half hours in water sufficient to float the fruit. Strain the liquid through a jelly bag, and to every pint of liquid add a pound of sugar (good quality lump). Boil again until the whole is a thick jelly. Place in small pots, cover the jelly with a piece of white paper soaked in brandy as a means of preventing mould growing on the jelly, and securely fasten down with air-tight paper.—E. MOLYNEUX.

Rose Excelsa.—I am pleased to see, in the issue for October 24, page 515, that Mr. M. H. Walsh has been honoured so highly for raising this wichuraiana Rose. I am sure it will take the place of Crimson Rambler, not because it is superior in colour to that old favourite, but because it is so immune from mildew, which

is the weakness of Crimson Rambler. *Excelsa* is a grand Rose in every way.—E. M. [We think that, apart from its freedom from mildew, *Excelsa* is superior to Crimson Rambler, as the flowers do not turn magenta blue with age.—ED.]

A Good Specimen of the Mexican Orange.—The accompanying illustration of the Mexican Orange, *Choisya ternata*, is from a photograph kindly sent us by Miss Philbrick, The Cedars, Halstead, Essex, the president of the National Sweet Pea Society for 1915. This is one of the most beautiful of our flowering shrubs, its umbels of fragrant white blossoms opening usually in May, to be followed in some years by a less bountiful display in September or October. It needs a situation screened from north or east winds and soil that is well drained, and in very severe weather should have an old mat or two fixed round it. In writing, Miss Philbrick states that the shrub illustrated is growing beside the front door of her residence, and that it is 7 feet high and about five feet in diameter. It has been planted about six years.

Government Trading in Ireland.—About a year ago evidence was placed before the Council of the Horticultural Trades Association of Great Britain and Ireland that the Irish Board of Agriculture was, through its county committees, purchasing, at the lowest wholesale rates they could obtain, all sorts of nursery stock. This was being divided up and passed on to large and small land owners and holders. It was considered an interference with the legitimate trade of Irish and other nurserymen, and a remonstrance was sent to the proper quarter. A reply was received to the effect that the intention of the procedure was to encourage small farmers and landowners to go in for fruit culture. To this, strictly carried out, there could possibly be no great objection. Again, however, in 1914 the old unfair game is being played. Numerous county committees of agriculture are sending round for estimates for not only fruit trees, but forest trees—Scotch Pine, Austrian Pine, Elm, Larch, Spruce Fir, Ash and Birch—in various sizes; also plants for cover, evergreen and flowering shrubs and Roses. Surely these are not all required to encourage the small farmer and landowner to go in for fruit culture! One correspondent informs me that "Not only cottagers, but noblemen can get supplies through their county committees," and that "the practice is general throughout nearly the whole of Ireland." I think the case wants to be stated in other than a private trade journal. Therefore I take the liberty of sending this note for publication in the columns of THE GARDEN. Publicity is often the first step towards reform.—W. CUTHBERTSON, *President, Horticultural Trades Association*.

Propagating Perpetual-Flowering Carnations. It is true that, as pointed out by Mr. Brotherston (see page 517), a pronounced diversity of opinion exists as to the most suitable time for propagating these plants. For a considerable number of years, from the time the variety Miss Joliffe was in its prime onwards, I aimed at getting a good batch of cuttings rooted in autumn, and, provided these were of the right stamp, all was well. I cannot, however, agree that at that season they root with "more facility" than at other times. The correct type of cutting will root well at almost any time, but I have never yet seen the finest cutting available in January capable of equalling, much less overtaking, one of equal quality rooted in September

or October. The fact is, it cannot be done. Some plants may be "forced," but a Carnation only at its peril. The plant rooted and potted in October is possessed of a root economy far in advance of that rooted in January, and will have made two or three good breaks. But if these are useful in their way, the January and February rooted stock is invaluable, since it is from such that the grower obtains his high-class midwinter flowers and top prices. Hence both seasons have their value, and the gardener, commercial or private, who requires a long succession of high-class flowers will be well advised to embrace both. The "heel" cutting I gave up some years ago in favour of the joint-made one, the latter making much the better plant. As a rooting medium, there is nothing to equal well-washed sand, and in a 2-inch-deep bed of it there should be few losses if the cuttings are of the right sort. The amateur who has no frame should procure a box and cover it with a sheet of glass. A box 18 inches by 12 inches by 9 inches will take quite a number of pots, and those of 5 inches diameter will accommodate ten or a dozen cuttings easily. Use well-drained pots, with a little soil or Cocoanut fibre above and the rest pure sand, and one has the best means available for the successful propagation of these plants.—E. H. JENKINS.

— Mr. R. P. Brotherston, in his article on Perpetual-flowering Carnations on page 517 of THE GARDEN for October 24, raises an interesting point about the proper time to take the cuttings, and also the sort of plants which are used for stock purposes. As regards the question of propagation in the autumn or spring, I am decidedly in favour of the former, as I have proved that these make the best plants. Some varieties make roots much quicker and surer than others, and when rooted are much faster growing. These, I think, are the ones that can be propagated in January and onwards, and will make as fine plants by the autumn as those struck earlier. I have tried several different rooting mediums, and the one I have had the fewest failures with is two parts brown sand, one part finely sifted loam and one part leaf-soil. There is thus a preponderance of sand, and the leaf-soil and loam help to bind it together and provide a little nourishment throughout the winter months. We place the cuttings singly in 2-inch pots, make up a mild hot-bed, and plunge the pots in Cocoanut fibre refuse. The cuttings are well watered in, and in from ten to fourteen days some of them are ready to come out of the fibre. They are wintered on a shelf in a cool greenhouse, and as soon as growth commences in the New Year they are pinched and potted on into 3½-inch pots, then into 5-inch, and finally into 7-inch. The first pinching produces four or five shoots, and is much better, as Mr. Brotherston suggests, deferred until January. As regards the type of plant for stock purposes, I have found the following a good way: About April take a few plants of each variety, and either plant them out on a north border or stand them out in the pots. These plants will continue flowering all the summer, and if kept cut will produce an abundant crop of clean, healthy cuttings by the autumn. These can be taken off and struck as I have suggested. A north border is not absolutely necessary, but in a summer like the past would be preferable. I might say here that we usually stand about half our plants outside during the summer, and those left in are again potted on into 8-inch pots in March, and continue to give

abundant supplies of bloom all through the summer months. I once asked a gardener friend who grew these plants well when he struck his cuttings. His reply was: "All the year round." I thought that opened up a still wider field.—R. W. THATCHER, *Carlton Park Gardens, Market Harborough.*

IN A HAMPSHIRE GARDEN.

NOTES ON THE NEWER DECORATIVE ROSES.

LOOKING back over the season of 1914, one can but feel that it has been a wonderful Rose season—to all but the exhibitor, to whom it was probably disappointing, disappointing, though, chiefly by reason of the fact that the Roses did not come at the *right time*. Here in Hampshire the Roses were too early for the shows, and the first blooms were all over before June was out; in fact, mine were at their best between June 15 and June 22; but leaving the exhibition point of view out of the question, it has undoubtedly been an exceptional season, suffering at times from a lack of rain, but for general quality and quantity of flowers unsurpassed in my recollection. Aphides troubled us but little, though they were never allowed to get a hold. Abol, which I always use, was applied early; but I only used half the quantity that was required last year. Mildew, generally rather troublesome, was tackled with Seride, which is quite good for the purpose, and only quite recently has the disease been at all prevalent. Black spot has not been so apparent as in previous years. Formaldehyde was used as recommended by Dr. Waddell, and while I cannot say it is a cure, the disease has been far less destructive, and only those plants that are particularly subject to it, such as the Pernetianas and their hybrids, have shown traces. Some, such as Prince de Bulgarie and Hugh Dickson, that were badly infected last year, have this year practically escaped. I have been quite free from any other pest.

Where all Roses have been so good it is difficult to pick out the best, but the following have, I think, stood out as being very fine. We are gradually getting some good yellows, and the season has suited this colour, being, on the whole, while sunny, not too much so.

Melody has been particularly beautiful here. I have about fifteen plants of it, ten in one bed, so that my experience is not the result of the behaviour of one or two plants. It is very free-flowering, of good colour, though not very large even when fully out, and makes a good button-hole flower in the young stage. It is deliciously scented, a good grower of medium rather than vigorous growth, and is more nearly allied to a Tea than to a Hybrid Tea. It is one of the best of Roses for table decoration, lasts well in water, and its foliage forms a fine contrast to the pale yellow (with a deeper centre) of its flowers. It came through the winter all right, and is a great acquisition to garden and decorative Roses. It has made plenty of good growth, and is altogether a better Rose than I was inclined to give it credit for last year. Messrs. Alex. Dickson and Sons of Newtownards are the raisers, and when better known it should become very popular. To anyone who is desirous of planting a bed of a good yellow Rose, I can confidently recommend him or her to try Melody.

Mme. C. Lutaud, raised by M. Pernet-Ducher and sent out in 1912, is another very fine flower of rather more substance and carrying its flowers on longer footstalks perhaps than Melody. It could be described as a pointed form of Marquise de Sinety. It is a fine grower, with curiously serrated foliage of a good bronze shade, and has been very fine with me this autumn. It is a Hybrid Tea, but not of the Soleil d'Or race, and so far has not suffered at all from black spot, that dark blot on the escutcheon of all the Pernetiana Roses. It is a Rose to make a note of, and should certainly be tried by all who have not got it. A good dark chrome yellow, with the outside petals sometimes stained rosy scarlet and carmine, it lasts well when out, and does not fade so quickly as most yellows.

Mrs. Ambrose Ricardo.—Sent out this year by Messrs. S. McGredy and Son of Portadown, Ireland. Of all the new Roses that I have tried this year—and I have had a good many not yet in commerce—I am inclined to say this is the finest introduction. It is certainly the largest yellow I know, and very nearly the largest Rose; exquisitely scented, of fine form, right up to the highest exhibition standard, and at the same time a good decorative plant. The colour is a good shade of yellow, with a deep, almost buff, centre of the shape of Mrs. Amy Hammond. It is a good grower, of good habit that is branching and not too vigorous, and free-flowering. The raisers were, unfortunately, unable to exhibit any of their Roses for the gold medal this year, and so I am afraid Mrs. Ambrose Ricardo will miss that distinction; but few Roses deserve it better. It has been the surprise of the year to me, and although I liked it when it was exhibited in 1913, it was not then shown in character. It is a very much better Rose than the blooms exhibited would have led one to expect, and I am inclined to think it is the best Rose these raisers have yet given us. It keeps its colour well, and lasts a long time both cut and on the plant. The trade as well as the amateur should make a note of this Rose, and get it if they have not already done so.

The foregoing three yellows are all Hybrid Teas. The best yellow Tea is undoubtedly (from a bedding point of view)

Lady Hillingdon. This Rose improves every year with me, and a small bed of fifteen plants has never been without flowers since June, and even now in October has been as full of flower as at any time during the whole season. There is no other yellow quite so dense in colour. It is really a deep apricot. The scent is very sweet and fruity in character. The foliage and habit of the plant are good. Its only fault is that the footstalks are too thin and the flower generally hangs its head; but there is no denying its beauty, and the glow of colour is intense. With foliage of Rosa rubrifolia or its own it makes a charming decoration either for vase or table, and although it is a Tea it is not so tender as some. The May frosts this year did not injure it nearly so much as they did some of its supposed hardier cousins, the Hybrid Teas. For some reason that I cannot understand there is a prejudice against this Rose which I have noted on more than one occasion. It will make a far more satisfactory and more permanent bed than Rayon d'Or, which Rose I overheard a nurseryman who ought to have known better recommending in preference to it.

Southampton. HERBERT E. MOLYNEUX.

(To be continued.)

ROSES IN OCTOBER.

LAST week a gardening friend asked what, in our opinion, was the greatest improvement that had been effected among Roses during the last twelve or fifteen years? For answer we took him into the garden and showed him Roses blooming freely, not the odd one or two caricatures of Roses that sometimes pass muster for the Queen of Flowers, but large, well-formed, fragrant blooms that would not, many of them, have disgraced a June garden. No doubt the mild, open weather we have experienced in Essex has had something to do with the quality of the flowers; but, mistake it not, the greatest progress has, in recent years, been in the lengthened period of flowering—from June until well into October or even November.

late in starting to blow, but who retains her deep blushes until her heart is hardened by the winter frost. Last year this did not happen until after Christmas.

Having assorted our October Roses so far, we find so many clamouring for the next position that it is impossible to allocate it to any one. They must be content to come in the order that we jotted them down in a much-used, and our friend suggested much-abused, notebook. Here, then, in that order, we present them: Mrs. Arthur Munt, glorious blooms of creamy white; Mrs. Aaron Ward, white, with deep yellow base; Lady Pirrie, a wonderful shade of apricot pink; Hugo Roller, deep cream, edged carmine; Mrs. E. J. Holland, a rather peculiar shade of old rose, but exquisite in form; Sunburst, glorious nankeen yellow, better than in hot weather; Mrs. Herbert Stevens, the dainty, refined lady of all the white

WINTER - FLOWERING BEGONIAS.

THE magnificent group of these Begonias contributed by Messrs. Veitch to the meeting of the Royal Horticultural Society on October 20 must have aroused in many feelings of pride not unmingled with regret. The reason for a natural feeling of pride is that the whole of this splendid section of flowering plants has been developed from comparatively small beginnings within the last thirty years or so, and all must be credited to British horticulturists. For many years, commencing with the variety John Heal, Messrs. Veitch were alone in producing new kinds; but of late Messrs. Clibran of Altrincham have come prominently to the fore and given us annually some really good things.

There is one point of difference between the productions of the two firms, and that is that most of Messrs. Clibran's Begonias have either double or semi-double flowers, whereas those raised by Messrs. Veitch, or, rather, by their enthusiastic grower, Mr. John Heal, consist for the most part of varieties with single blossoms. The later novelties from this last-named source approach much more nearly the members of the tuberous-rooted section than did the earlier crosses, in whose production Begonia socotrana has played a part. This was especially notable in the case of the variety Optima, which attracted more general attention than any other kind shown on October 20. This variety is of a good bold, yet sturdy habit, and the flowers, which are large and well shaped, are of a pale yellowish salmon colour. Other new or comparatively new varieties of this section, several of which have been given awards of merit by the Royal Horticultural Society, and most, if not all, of which were shown on the above-mentioned date, are Acquisition, salmon rose; Emita, rich orange scarlet, very bright and fine; Epirus, rosy pink; Exquisite, salmon pink, light centre; Fascination, orange salmon; Her Majesty, salmon yellow; Optima, referred to above; Rosalind, rose; and Syros, pale salmon, dark foliage and late in flowering.

The regret alluded to in the early part of this article was that we had seen the last of Messrs. Veitch's wonderful collections of these charming flowers, which for

years have done so much to brighten up the Royal Horticultural Society's Hall at a time when bright-coloured blossoms are none too plentiful. They are usually referred to as winter-flowering Begonias, but perhaps late autumn and early winter would be nearer the mark. Even before the group of these flowers above alluded to was exhibited, the announcement was made that the entire stock would be disposed of by auction just one week later, which sale has now taken place. A perusal of the catalogue serves to show that there was at Feltham (where these plants were grown) a considerable number of these beautiful Begonias, consisting altogether of about 4,800 plants. The variety Optima would appear to be as much appreciated by Mr. Heal as it was by the visitors to the hall, for about 600 plants of this were announced in the catalogue.

It is by no means alone in Begonias that Messrs. Veitch's retirement will be regretted, for although



BLOOMS OF ROSE JAMES COEY, A BEAUTIFUL PALE YELLOW HYBRID TEA VARIETY FOR SUMMER AND AUTUMN.

It may be of interest to briefly record those varieties which, during the closing days of October, gave us such pleasure. Place of honour must be given to Gloire de Dijon. In mid-May, before the last of the Tulips had departed, this started to flower, and has not ceased since, nor is it likely to do so if the weather keeps mild. Exhibitors, of course, will say the flowers are of poor shape, but its vigorous habit, quaint buff colour, delicious Tea fragrance and freedom of flowering will ever retain for it a deep niche in our affection. Next must come General Macarthur, a crimson bedder as fragrant as it is free. Mme. Leon Pain, with its pink, shaded apricot flowers, is placed third; its habit is so good, too, for beds. On a level with these three we must place the Polyantha varieties Jessie, crimson scarlet; Phyllis, bright pink; Orleans, rose pink; and Katherine Zeimet, white. And we give place of honour in this quartet to Jessie, a dainty little lady who is rather

Roses; White Killarney, a poor Rose in the summer, but good in the autumn, not really pure white; Irish Fireflame and Irish Elegance, a pair of singles that ought to be in every garden; Mrs. J. Laing, a Hybrid Perpetual that always mildews badly in the autumn, but we must have it for the fragrance of its pink flowers; Betty, a fine garden Rose; Mrs. Wakefield Christie Miller, pink, with deep glowing rose reverse; Mrs. Walter Easlea, fragrant, crimson scarlet; Mrs. Edward Powell, rich crimson; Gustave Regis, the button-hole Rose, nankeen yellow buds; Frances Charteris Seton, very fragrant and of exquisite shape; James Coey, soft yellow, almost the shade of Maréchal Niel (see illustration); Pharisæer, rather tall and free, silvery pink; Mme. Abel Chatenay, and Duchess of Wellington, rich yellow. The last-named does not open too well when the weather is wet, but, given a few reasonably dry October days, it is superb.

the fruit tree traditions may still be upheld from the historic soil of Langley, we shall greatly miss the charming stove and greenhouse plants, which were rarely, if ever, absent from the fortnightly meetings; while one can scarcely realise the loss to horticulture in general by the dispersal of the Coombe Wood collection. With the great sale of fruit trees at Feltham in November, we see, I understand, almost the final act of the passing of a great firm, a firm that will be missed by every horticulturist in the kingdom.

Though I have departed somewhat from the heading of this article, a few words may well be spared Messrs. Clibran's race of these Begonias, in which double and semi-double flowers predominate. Particularly striking are some of their newer kinds, notably Empress, salmon red; Matchless, salmon; Picotee, orange salmon; Radiant, brilliant cerise crimson; Vivid, bright scarlet; and Vulcan, rich crimson.

H. P.

MUSHROOMS ALL THE YEAR ROUND.

It may, perhaps, be interesting to other readers if I describe how I grew Mushrooms all the year round in a large stone-built shed which was very cold. To keep the frost from getting at Potatoes stored in the shed, I had to fasten mats and sacks close inside a large window in the front wall, and the Potatoes were covered with a large thickness of straw and garden mats. Having the manure from three or four stable-fed carriage horses, I placed this on the floor of a very large open-fronted cart shed in the stable yard. The manure was spread out thinly and not allowed to get very warm at any time. In about three or four weeks' time there was thoroughly mixed with the manure well-chopped decayed turf, taken off a meadow, in the proportion of about one barrowful of turf to about three barrowfuls of the manure.

When this was well mixed together, it was taken into the shed and placed on a good thick foundation made with the straw shaken out from the manure. The bed would be about four feet wide and about two and a-half feet deep. The manure when spread out on the bed was well trodden down. The bed never became hot, so that in the course of a few days it was planted with the best spawn, broken in lumps as large as ducks' eggs, these being placed about six inches apart. All the spawn was planted about three inches deep with a garden trowel, and the manure taken out of the holes for the spawn was then replaced and rammed down firmly. The temperature of the bed was tested by means of a few pieces of Bean sticks pushed well into the bed, and the heat tested by the hand.

In a few days after spawning the bed, if the heat was not rising, there was placed on the top about four inches of decayed turf, which was made wet by watering it with warm water from a rosed watering-pot. Before putting it on the bed this soil was well beaten down with the back of a garden spade. Then for the winter crops about a foot thick of best hay was placed over the bed. Hay keeps the bed much warmer than a straw covering. From beds made like this I always got fine crops of Mushrooms. The Mushroom-beds in the winter were very seldom watered, when in full bearing, but towards the early summer and onwards they were given a



THE LAMB'S-EAR PLANT (STACHYS LANATA) GROWING IN THE LOWER COURSES OF A DRY WALL.

fair soaking of warm water in which was put a small quantity of table salt. At our local vegetable and flower show held here in July, as I happened to have a Mushroom-bed in full bearing, I entered a class for twelve dishes of vegetables, and also one for nine dishes. In each collection I had a fine plate of two entire clumps of nice pink Mushrooms. Each clump was lifted from its bed and placed upside down on the large dinner plates, which the Mushrooms nearly covered. I was fortunate in getting first for the twelve dishes, also for the nine dishes. I generally had more Mushrooms than my employer wanted for his family, so the surplus was given to his friend.

Newport, Mon.

R. GIDDING

THE LAMB'S-EAR PLANT.

A PLANT of unusual aspect, and one that is not frequently met with, is the so-called Lamb's-ear Plant, known to botanists under the name of *Stachys lanata*. Its unique appearance is due to the thick, woolly foliage and stems, which are of a silvery white hue, and provide a welcome change during the summer months from the glaring colours of the surrounding flowers. It is a plant that will thrive with a modicum of soil, and even that need be only of the poorest character. For this reason it is admirably adapted for planting in the lower courses of a dry wall, as shown in the accompanying illustration, where it is quite at home and has formed an attractive and interesting specimen.

RESTORING VINES TO HEALTH.

BEFORE deciding on the course to take with the object of restoring sickly Vines to good health, it is well, first, to find out, if possible, what has been the cause of failure, because if it is the result, say, of an attack of red spider, thrip, mealy bug or any other pest injurious to the Vine, it is obviously useless to incur the expense and labour of replanting in new soil before these pests are destroyed. It may be that none of the above causes has operated to bring about the ill-health of the Vines, but rather that it has been caused by the exhausted condition of the soil, defective drainage, or that the main roots are deeply embedded in uncongenial subsoil. This can only be ascertained by examining the roots and the condition of the border, which we will now proceed to do, say, at the end of October or at any time during the winter, but the earlier the better after the time mentioned. Many Vines are planted in borders which are partly outside and partly inside, others in outdoor borders only, and others, again, in inside borders only. The work of renewing the borders is much the same in each case. Taking the double border as an example and treating the inside of it first,

the first thing to do is to clear the vinery of all plants or any other portable article likely to impede the progress of the work, and then cut a trench 18 inches wide the whole length of the border and as deep as the bottom of the border, say, 2½ feet. The side of the trench next to the Vines must be at least 8 feet distant from them. The whole of the soil in the trench, down to the drainage at the bottom, should be wheeled away. All roots that are come in contact with in forming this trench should be cut through with a knife. Having cleared the trench of all the soil, the next thing to do is to purchase a well-made five tined fork, and gradually and carefully to work away the soil from the border into the trench until we

reach within 2½ feet or 3 feet of the stems of the Vines. If it is found—as it often is—that the soil thrown back from the border into the trench more than fills it, and that it hampers the workman at his work, have it wheeled away, as ultimately all this shifted soil will have to be cleared away. Assuming now that the whole of the soil has been cleared away from the roots of the Vines to within 3 feet of their stems, the next thing to do is to collect the liberated roots carefully together and turn them back on to the top of the border at the base of the Vines, placing a wet mat over them and a fairly heavy board on the top of that to keep them in position until wanted for replanting.

The Bottom of the Border.—

Having cleared the whole of the soil away from the part excavated, an opportunity will be given to examine the drainage. If the border is found to rest on a subsoil of gravel or any other material sufficiently porous to admit of the free passage of water, no better bottom is needed; but should it be resting on clay or some other substance equally impervious to the passage of water, the bottom must be concreted and drainage secured by the insertion of rows of 3-inch drain-pipes at distances apart of 4 feet, having sufficient fall and an effective outlet, filling in between the pipes (and deep enough to cover them) with broken bricks, stones and potsherds. Should it be found in clearing away the soil from the border that some of the Vine roots have penetrated into the subsoil, rather than try to trace them to their source and lift them for replanting it will be better to cut them off, as such roots are of practically no value to the Vine. We have now finished what may be termed the pulling down or destructive part of the work of renovating old Vines, and will now proceed to the more congenial part of building up new material which is to give new life and greater fertility to the Vines.

The Soil.—It is considered by some gardeners to be an advantage to cut and stack the turf before it is wanted for use. My experience of making Vine borders goes to show that there is no advantage attending this practice.

The first thing to do before preparing the new soil is to find out about how much will be required to fill up the new border. The planter must bear in mind that little more than half the space of the border which has been cleared of soil will be available for filling up for the present replanting of the Vines, the other portion being reserved for another addition of fresh soil to the roots in two years' time. As the success of the Vines for so many years will depend on the quantity of the soil in which their roots are planted, no expense or trouble should be spared in obtaining the right sort. The best is that obtained from an old meadow pasture, of heavy rather than a light

texture, with a fair depth of loam underneath, and resting on sandstone, limestone, or even gravel. The grass must first be cut off as close as possible, and the turf may be cut into any lengths and widths desirable, but they must not be cut of greater depth than 5 inches. It is only at this depth that masses of grass roots, or fibres, are found in the turves, and which add so much value to Vine soil. The turf should be chopped up with a sharp spade into pieces the size of the fourth of a brick. To each cartload of such turf add two barrow-loads of old broken bricks, reducing them to the size of a hen's egg,

of course, run the whole length of the border. This will give a space of close on 3 feet to be filled with new soil for the Vine roots to root into, and still leave space behind the turf wall to be filled up with new soil for the further encouragement of the Vine's growth in two years' time. In commencing to fill the space between the turf wall and the roots of the Vines with the new soil, the largest and coarsest of the lumps of turves should be selected and placed at the bottom on the drainage to the depth of 5 inches, ramming them down firmly. Before proceeding to add any more soil to the new border, we must now

examine the roots placed under the mat as directed. All it will be found necessary to do will be to cut back the jagged ends of the shortened roots with a sharp knife, taking care that the cut is a slanting one and the surface of the cut facing upwards. From this cut, facing upwards, roots will be formed with a tendency to grow upwards, forming valuable surface roots; on the other hand, if the end of the root is cut with the face of the cut part facing downwards, the new roots formed would have a decided tendency to strike down to the bottom of the border, and probably to the subsoil.

Planting.—In the first place, put a layer of the new soil 4 inches deep over the rough, turfy soil already at the bottom of the border, pressing it down firmly. On this place the bottom layer of roots, packing the soil over and round them firmly with the hands. Add another layer of soil of the same depth and a layer of roots as before. The last layer of roots should be 6 inches below the surface of the border when it is finished. It will be observed that the soil placed over each layer of roots should be firmly pressed down, as Vines succeed so much better in firm soil than in that which is loose and light. The soil at planting-time should be on the dry rather than the wet side.

We have now finished replanting the roots of the Vines. It only remains for the space of the old border left vacant behind the wall of turf to be filled with fresh leaves. Beech or Oak leaves for

preference, and be trodden down hard. New summer roots will find their way into the leaves, with the result that considerable added strength will be given to the restoration of the Vines. These leaves should be taken out the following winter, cutting away any roots there may be back to the face of the wall of turf, and filling again with leaves as before. The second winter the leaves must be taken away and the roots treated as before, the space filled this time with soil and made to form part of the new permanent border. I have been presuming that the Vines under treatment are growing in a double border (inside and out) and that the inside only has been treated.



THE BALEARIC SANDWORT (*ARENARIA BALEARICA*) FORMING A FLORAL CASCADE IN THE ROCK GARDEN.

and adding the small stuff and the dust which comes from them (the function of this material is to keep the border sweet, porous and well aerated), one barrow-load of old mortar or plaster rubble, a small barrow-load of quicklime, 20 lb. of half-inch bones and the same of bone-dust, and half a bushel of soot or of wood-ashes. Mix the whole well together by turning over several times, when it will be ready to plant the Vine roots in.

The first thing to do in starting on the new border is to build a wall of turf about a foot wide and as high as the surface of the old border, and at a distance from the stems of 6 feet (it will,

The outside part will have to be served in the same way as the inner one, and in the case of single borders, either inside or outside, the treatment will have to be the same.

The border should receive a good soaking of clear water to settle the soil about the roots as soon as the planting is finished, afterwards covering the border to the depth of 7 inches with leaves to keep it fairly dry and safe from the effect of severe frosts. The leaves should be removed the first week in May, and the border left exposed for a fortnight to dry and sweeten its surface, when it may receive a good soaking of weak manure-water, afterwards adding a mulching of fresh horse-manure and loam in equal quantities, with a light sprinkling of bone-dust. This mulching should be 3 inches deep and pressed firmly to the border, covering it to the same depth with half-decayed litter to prevent too rapid evaporation. As a result of this treatment it will be found that by midsummer, or soon after, the new soil and mulch will be densely permeated with new feeding roots, and the Vines correspondingly strengthened.

My remarks so far have applied to root culture alone, which, after all, is the mainspring to all good culture, as, unless a plant or a tree possesses abundance of healthy, strong roots, successful results are impossible. I will only say this much in reference to the culture of the Vine itself under glass—that the cultivator must bear in mind the rough ordeal the roots of the Vines have gone through. The Vines must not be forced prematurely into growth, but allowed to break naturally through sun-heat in spring, the object being to secure as strong a break of shoots as possible. The Vines should only be allowed to carry a very light crop the first year after lifting; afterwards they may carry full crops. X. Y. Z.

BERRIED SHRUBS FOR THE ROCK GARDEN.

DURING the autumn and winter months, when rock garden flowers are by no means plentiful, the dwarf Cotoneasters, with their scarlet or red berries, and, in some instances, evergreen foliage, are interesting and beautiful. There are several species well adapted for planting at the summits of good-sized boulders, over which their neat, close-growing branches can trail; or, if preferred, such as *C. horizontalis* can be planted at the foot of a large rock, which, as it grows, it will hug so closely as to almost appear to be part of the rock itself. This is a deciduous species, but in autumn and winter its branches are bespangled with scarlet berries. *C. microphylla*, as its name implies, has very small leaves. It forms a neat little shrub, and is evergreen. It has red berries, and is perhaps the best of the older species for the rock garden. *C. rotundifolia* is deciduous or sub-evergreen, the leaves being nearly round and dark green in colour.

It has red berries, which are usually produced in abundance. All three are natives of the Himalayas, and are not difficult to grow. *C. adpressa* was introduced to this country from China some years ago, and promises to be a very useful shrub for the rock garden. It is of very dwarf habit and deciduous, but before they fall the leaves turn a beautiful orange colour. It has small pink flowers, which are succeeded by red berries. *C. humifusa* or *C. Dammeri* only grows a few inches high, and is admirably adapted for trailing down the face of a projecting rock. It is evergreen, the foliage taking on a fine tint in autumn, which harmonises well with its scarlet berries. All these Cotoneasters like good loamy soil, and *C. humifusa* appreciates a little peat mixed with the loam. They should be given a fairly deep root run; a foot is not too much for *C. horizontalis*, *C. rotundifolia* and *C. microphylla*. All can be successfully planted

THE MARSH MARIGOLDS.

IT would be difficult to find a more pleasing British bog plant than the common Marsh Marigold or Kingcup, *Caltha palustris*. Its brilliant golden blooms, so neatly set off with a foil of delicate green foliage, transform our swamps into beautiful pictures during the latter part of April and the early days of May. In the Southampton district we have vivid recollections of acres of marshland transformed almost into a carpet of gold with the blooms of this plant. Happily, in our gardens we are broad-minded enough to make use of this wilding by the margins of ponds or lakes, where vegetation of many kinds can be allowed to follow its own sweet will and produce its floral tribute unspoiled by too severe restriction.



A WATERSIDE SCENE IN THE GARDENS AT LOCKINGE—MARSH MARIGOLDS IN THE FOREGROUND.

early in April, but it is advisable to obtain plants that have been established in pots. S. X.

THE BALEARIC SANDWORT.

THERE are few more easily grown plants in the rock garden than the dainty little Sandwort that has the rather unwieldy name of *Arenaria balearica*. It loves a shady and, in summer, a rather moist situation, where it will quickly establish itself and form a perfect carpet of vivid green. When in May this verdure is closely studded with the tiny white, star-like blossoms, the plant never fails to elicit praise from even the veriest tyro. In the illustration on page 544 it will be seen forming a sort of floral cascade over some sandstone boulders, the effect thus created being a particularly happy one. Although it prefers shade and moisture during hot weather, this plant is so accommodating that it will give a good account of itself in almost any situation. It is easily propagated by division, preferably during moist weather in spring

In addition to the ordinary Marsh Marigold, there are two varieties with double flowers, viz., *C. palustris flore pleno* and *C. p. monstrosa plena*. Both are useful for the waterside or bog garden, and the accompanying illustration shows a few good plants of the former in the famous gardens at Lockinge. A comparatively new addition to the genus, and a giant in stature, is *C. polypetala*, a very noble plant that ought to be found on the margins of every garden pond in the country. It attains a height of 2 feet, and its large yellow flowers are produced on stout, robust stems. Individual leaves often measure 1 foot across, hence when not in flower it is quite an attractive plant. These Marsh Marigolds are by no means difficult to grow, and can be planted at almost any time during the winter, though many prefer early spring. They all need moist soil, and are best planted in fairly large pieces, preferably by the side of a stream or pool, as shown in the illustration.

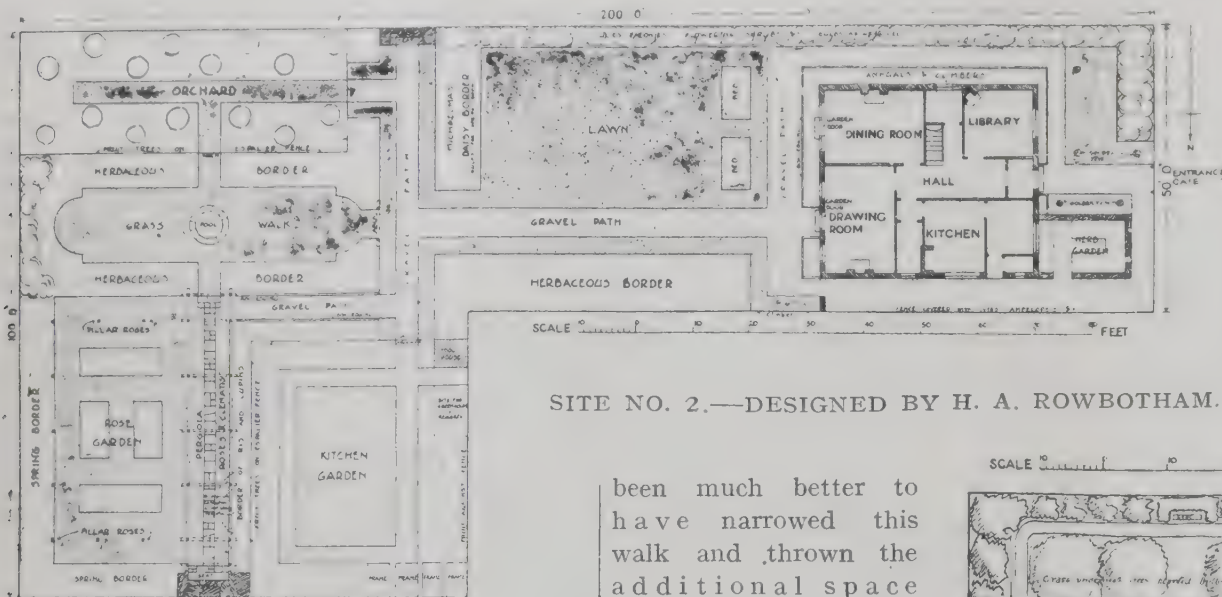
THE LITTLE GARDEN.

FURTHER PRIZE DESIGNS IN OUR COMPETITION.

WE now reproduce a further series of designs which secured prizes in our recent competition. Mr. H. A. Rowbotham won a book prize for Site No. 2. A good point about his scheme is that he has kept steadily in mind the views

(not reproduced), to which a book prize was also awarded. In his No. 3 design we notice the common failing of a pergola which bears no very definite relation to anything, though it has the subsidiary advantage of screening the little alpine garden from the Rose garden south of the dining-room. Something may be said in criticism of providing a gravel walk 10 feet wide and nearly 100 feet in length. It gives a rather cold and bare appearance, and takes an amount of maintenance which we should grudge. It would have

In discussing the making of the little garden, *Country Life* lays down six outstanding points which need to be borne steadily in mind. "In planning it is important (1) to ensure that every part of the garden shall bear a definite relation to the house which it serves. (2) That the design shall be essentially simple, *i.e.*, that the space shall not be frittered away by multiplied features; and (3) that the lines of these parts shall be so laid down that the whole shall achieve a definite shapeliness. The three points in planting are subordinate to the fact that the owner of a little garden can rarely devote either much money or considerable labour to its tending. He, nevertheless, should seek to secure (1) a sufficient rotation of flowers to ensure gaiety in the garden during spring and summer and early autumn; (2) as rich a pleasure in colour and scent as may be contrived with small expenditure; and (3) some practical return for his labour in vegetables and fruit. Many blunders would be avoided if it were generally appreciated that the whole garden scheme should be considered from the first in its relation to the house."



SITE NO. 2.—DESIGNED BY H. A. ROWBOTHAM.

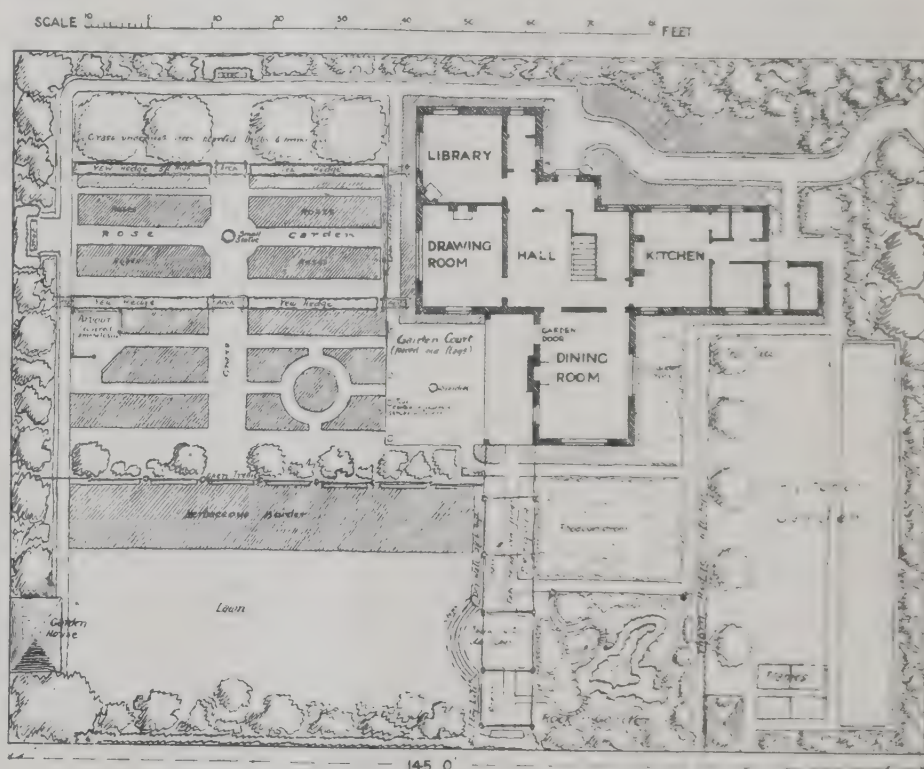
from the windows of the two principal rooms, but its defect is in the rather too ample spaces he has given to borders, &c. This garden would certainly take a lot of work to keep it up. The kitchen garden is well screened from the Rose garden, not only by the pergola, but also by espalier fruit trees, which are further used to form a boundary on its south side. It is not so clear that the espalier fence which borders the south-east corner of the site is so well placed, because the standard trees would keep the south sun from the fruit. The general criticism of the design is that it is rather too much cut up, and would in practice have a somewhat spotty effect.

Mr. Ernest Biggs shows some good ideas in his scheme for Site No. 3, which secured a book prize, but there seems to be no justification for the shapeless outline given to the entrance path. The draughtsmanship suggests that this competitor is more familiar with the practical side of gardening, and probably the scheme, if worked out, would look better than the drawing suggests. The pergola is well placed, because it joins up directly with the house verandah and leads to the rock garden, which it cuts off from the herbaceous garden to the west. It is doubtful whether a bank of Rhododendrons is a very interesting feature immediately outside the south window of the dining-room.

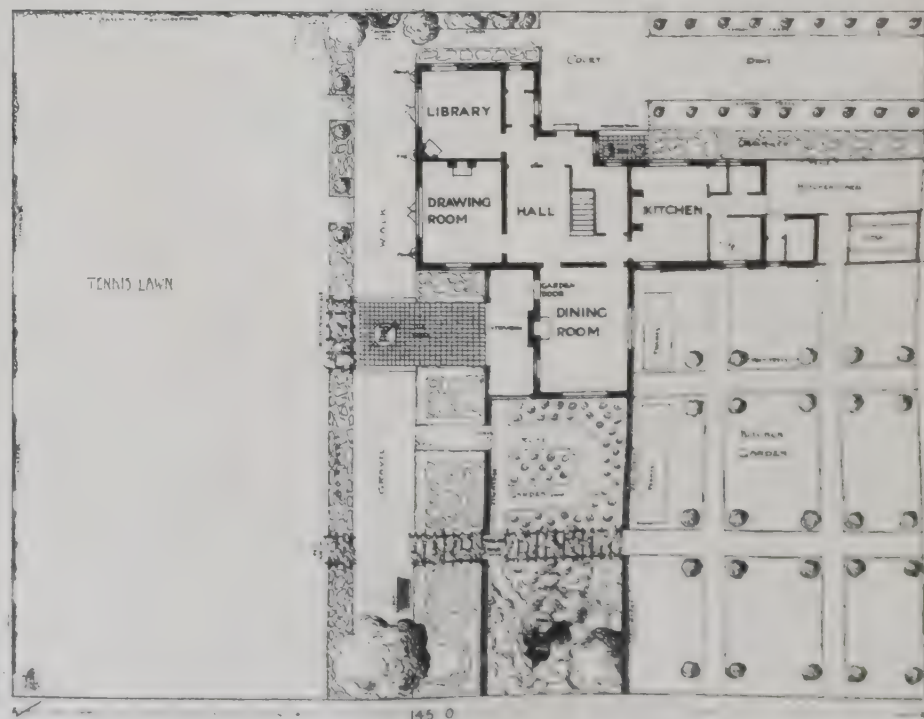
The last design we shall consider and reproduce is also for Site No. 3, for which Mr. Thornton Sharp received a book prize. It is in strong contrast to the treatment of the last design, which showed the minimum amount of plain lawn, whereas in Mr. Sharp's case he evidently thought that the demands of lawn tennis were paramount. He has succeeded in providing a lawn 50 feet wide, which is 10 feet narrower than the ideal, but the maximum that the site would allow. This competitor is evidently somewhat wedded to rustic features, which are not, however, used so extensively here as in his design for Site No. 4

been much better to have narrowed this walk and thrown the additional space into the borders, which would look distinctly meagre in so narrow a width as 4 feet. In the case of a design like this, where the claims of the tennis lawn greatly reduce the space available for other flowers, the proper policy to pursue is to mass the colour effect in a generous fashion, and that cannot be done with a 4-foot border. The kitchen garden is well arranged, and divided from the private garden by a Yew hedge, while the garden shed helps to mask the kitchen yard.

Although many others among the drawings to which book prizes are awarded showed a considerable grasp of the problems of design, they do not show any features which are not represented in the schemes illustrated in this and our last three issues. Enough plans, however, have now been reproduced to mark the variety and skill which the competition has evoked, and we are satisfied that our readers will have derived both pleasure and benefit from the study of the designs.



SITE NO. 3.—DESIGNED BY ERNEST BIGGS.



SITE NO. 3.—DESIGNED BY THORNTON SHARP.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Succession Peach Trees.—The pruning, washing and tying of these trees should be accomplished with as little delay as possible, so that by the end of the year all such work may be finished. Let the shoots be well thinned out before the trees are untied, so that the operator can see at once which shoots to remove. The aim should be to remove a number of old, unfruitful shoots each season, so that space may be available for tying in young fruiting wood. In cases where the soil has become exhausted, it is necessary to remove as much of it as possible without injury to the roots, and replace it with good, rich loam, to which a quantity of old lime rubble and crushed bones has been added. If the trees are young and the borders in good condition, the removal of an inch of the surface soil will be sufficient. See that the soil does not become too dry, or bud-dropping may result in the spring.

Tomatoes.—Fruiting plants must be very carefully watered during the winter months. A night temperature of 60° is quite high enough in mild weather, and this should be allowed to drop to 55° if cold weather sets in. Keep the atmosphere on the dry side, and remove side shoots as they appear. Succession plants which are intended to produce supplies in January may be given some stimulant twice weekly, and the flowers should be artificially pollinated as they become open. Air should be admitted night and day until a crop has been secured, after which the temperature may be increased, if necessary, to keep up a regular supply.

The Flower Garden.

Summer Bedding Plants which have been rooted in frames should be freely ventilated while the weather is mild. The tops of the most forward plants may be pinched out in order to keep them stocky.

Ranunculus.—The present month is a suitable time to make plantations of Ranunculus, although planting is frequently put off until the early months of the year. By so doing, however, one runs the risk of bad weather, and the operation may have to be put off too long, the vigour of the plants being reduced in consequence. The soil should be deeply dug and enriched with a dressing of decayed horse-manure. Plant in rows 9 inches apart, and cover with 2 inches of fine soil; or they may be planted in clumps on a sunny border which is set apart for spring-flowering plants.

Climbing Plants on Walls or Pillars.—Many of these, having become entangled, should now be liberated and trained in their proper quarters. Clematis will require careful attention in order to keep the shoots from injury. Cut away all superfluous growths, and train the remainder carefully to the wires. It is advisable to retain a good portion of the young wood in case the shoots may be thinned by sharp frost.

Lily of the Valley.—November is a good month to plant roots of Lily of the Valley. The ground should be well prepared by digging in a good quantity of decayed manure and sharp sand. A border facing north or east will suit them well. The crowns should be planted in rows 1 foot apart, and covered in such a manner as to allow the points to be just showing through the ground. A covering of fine leaf-soil may be placed over the border to the depth of 1 inch.

Plants Under Glass.

Arum Lilies.—If blooms are desired for Christmas decoration, some of the most forward plants should be placed in heat at once. A newly started vinery will suit them well. With regard to heat and moisture, water freely with liquid manure, and keep the plants well exposed to the light. For succession plants a frost-proof house is all that is necessary at present.

Eucharis grandiflora.—Plants which have been resting during the autumn may now be placed in a temperature of 70° with a view to producing flowers about the end of the year. These plants require a good supply of moisture to the roots, and, when the flower-spikes begin to push up, liquid manure should be freely given. If insects

are present on the plants, the foliage should be carefully sponged before the plants are placed in heat.

Begonia Gloire de Lorraine.—The earliest batch of these plants are now in full bloom, and will benefit by a slight drop in the temperature; 65° at night will be quite sufficient after the flowers have developed. Keep the atmosphere moderately dry, and open the ventilators during the early part of the day. Successional plants should be well supplied with atmospheric moisture and frequently watered with artificial manure.

The Hardy Fruit Garden.

Planting Bush Fruit Trees.—There is no time like the present for making new plantations of Gooseberry or Currant trees. In all cases the ground should be trenched and a good dressing of decayed manure given. If the ground is of a heavy nature, a quantity of wood ashes or old lime rubble may be mixed with it as the work proceeds. A space of 5 feet should be allowed between the plants, as this will permit them to grow for several seasons without being overcrowded. The planting of all kinds of fruit trees should be pushed forward while the weather is mild and dry. No work in this department is of such importance at present.

The Kitchen Garden.

Mushrooms.—If horse-manure is available, collect and prepare it for making up new beds, from which supplies may be expected about the end of the year. The material should be placed in an open shed and turned every second day, until sufficient has been collected to make up the bed. Make this quite firm by ramming, and spawn when the temperature of the bed decreases to 80°. Keep the atmosphere moist by damping the walls and floor, but avoid frequent watering of the bed. Avoid fire-heat, as this has a drying influence on the atmosphere; 50° to 55° is quite high enough.

Cauliflowers in Pits.—These plants should be freely ventilated during mild weather. Finish potting as quickly as possible, so that the plants may become established before winter sets in.

Lettuce in cold pits should be left uncovered as late in the season as possible, in order to keep the plants hardy. Keep the soil moved between the plants, and dust frequently with lime to keep slugs in check. Lettuce seeds may still be sown in a cold pit to produce plants for the spring. Maximum, Stanstead Park and Hardy White Cos are good varieties for this purpose.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Winter Spinach.—This important winter vegetable should be closely examined, and all weeds and decaying leaves at once removed; the latter are very harmful. Should the plants seem too close together, it will be as well to draw out a few, disturbing the soil as little as possible.

Potatoes.—Where these are forced early, the sets should now be selected and placed in shallow boxes with a view to starting them into growth. Some fine soil ought to be worked in among the sets, and have the boxes placed where there is a good light to encourage sturdy growth. Midlothian Early and Sharpe's Victor are excellent varieties for this early work.

Autumn-Sown Onions.—In many districts the transplanting of these may be done now; indeed, where this is possible, better results may be had from those planted now, as it checks too rapid growth. On the other hand, where the soil is heavy, and consequently cold and wet, it is much better to defer transplanting till the early spring.

The Flower Garden.

Roses.—The planting season is now here, and although planting may not have to be done to any extent, there are sure to be blanks to be filled up, or, it may be, the trunk of an old tree to be furnished. In this connection much can be done to brighten odd corners in the flower garden by planting here and there an occasional climbing Rose. Planting in such places should, as

far as possible, be carried out before the end of the year.

Salvia patens.—This lovely blue-flowered plant has been very fine this autumn, and was in bloom till well into October. When the growth has been cut down by frost, the tubers should be lifted, placed in boxes, and given the protection of at least a cold frame. In many districts the plant is allowed to remain outside during the winter, but at best this is rather risky. Unlike many other tubers, it must not be kept very dry, as, owing to the lateness of the growth, the roots are inclined to shrivel.

Pampas Grass.—Very few plants produce such a fine effect at this season of the year as the Pampas Grass, to say nothing of its usefulness in making up large vases for house decoration. These plants must now be protected from frost during the winter. Many fine specimens are lost annually through not observing this precaution. For these and similar plants there is possibly nothing better than sifted ashes for protection.

Rock Garden.—Many small alpine and rock plants of doubtful hardiness must be closely examined during cold and foggy weather. In some instances it may be necessary to transfer the choicest of these to the alpine frame. But as damping is most to be feared, a handful of small granite chips placed carefully round the plants may serve to bring them safely through the winter. Remove all decaying leaves and other rubbish which tends to create dampness.

Plants Under Glass.

Camellias.—Attend carefully to the watering of these hard-wooded plants at this season, whether grown in pots or planted out, as, if allowed to become dry at this stage, serious damage may result from buds dropping in the spring. Plants well set with buds may have frequent applications of liquid manure, and where buds are rather numerous these may be reduced gradually.

Ferns.—Among the greater number of these, active growth will have ceased for the season; therefore the greatest care must be exercised in watering. Although these must never be allowed to become dust dry, the supply of water to the roots should be reduced, to enable the plants to have a complete rest. This, of course, only applies to the deciduous varieties.

Roses.—Those growing on pillars or on the roof should now be pruned, and though cleanliness is essential to the well-being of all indoor plants, it is especially so with Roses, owing to the fact that they are mostly grown against walls, and therefore more difficult to keep clean. Before tying them up, have the wall and woodwork thoroughly washed down. As soon as they have started into growth, ventilating must be carefully attended to, as draughts will most assuredly bring about mildew. As a preventive it will be a good plan to put flowers of sulphur on the hot-water pipes.

The Hardy Fruit Garden.

Pruning Gooseberries.—Where large breadths of these are grown, the pruning is often very protracted work. A start, however, should be made at once, especially on wet and heavy soils. These, when the work is left until later, become very wet and sticky and make the task much more unpleasant. In this early pruning, allowance must always be made for depredations by birds by retaining a few extra shoots; that is, of course, if means cannot be adopted to protect them. Whatever method of pruning is followed, the centre of the bushes must in all cases be well thinned out, or, as I pointed out on a former occasion, the centre shoot may be trained to a stake.

Fruit Under Glass.

Late Grapes.—Owing to the dull and foggy weather usually experienced at this season of the year, special care will be necessary in the management of the late varieties of Grapes still hanging. Lady Downe's, with its thick skin, will be fairly safe for another month yet; but such varieties as Alicante and Lady Hutt will, owing to the size and thickness of the bunches, be more liable to be affected by dampness. An equal temperature of about 50° should be maintained and the house freely ventilated on fine days.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N. B.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

MEDICINAL herbs have been cultivated in this country for centuries, and in the Middle Ages were grown in kitchen gardens attached to monastic establishments and the mansions of noblemen. At the present day *materia medica* (or drug) farms exist at Mitcham, Carshalton, Hitchin, Ampthill, Long Melford, Steppingley, Market Deeping and Wisbech, but for many years the main source of British drugs has been mid-Europe, particularly Germany and Austria-Hungary.

During recent years the acreage devoted to drug cultivation in Britain has been more and more restricted by competition with wild foreign products, and the result has been a slow but sure ousting of British-grown drugs from the market. The advent of a European war has completely changed the situation, and an effort on the part of growers and drug merchants may largely secure for England the collection and cultivation for the future of medicinal plants which can for the present no longer be imported from Central Europe. Supplies of drugs, especially of Belladonna leaves and root, are much in demand, but in the case of other Continental drugs grown in England the shortage is not so serious.

The price of Belladonna has risen seriously (more than 100 per cent.) since the outbreak of war, and as it takes at least two years to grow this drug in quantity, the drug grown next year is likely to realise high prices. This applies in lesser degree to Chamomile, Dill, Dandelion and Valerian. The prices of Colchicum, Digitalis, Fennel, Henbane, Stramonium and "botanical herbs" must also be considerably affected.

The limited outlet for most drugs makes overloading the market a comparatively easy matter, and any grower who proposes to devote attention to the cultivation of medicinal plants should give the matter careful consideration before embarking on it to any serious extent. For a number of growers, however, who can successfully raise good crops, handsome profits should be made in the near future.

Co-operation.—The most important drug industry—Cinchona bark production—has witnessed quite recently the fruits of co-operation between producer and manufacturer in restricting the output within reasonable limits. So far, consumers appear to be unaffected, while all other handlers of bark and quinine, other than speculators, are in a decidedly better position.

Some arrangement might perhaps be made to ensure British drug-growers a fair return for their efforts. Co-operation between growers and wholesale druggists would probably prove effective.

Soil and Manuring.—Soil in good condition for ordinary farm crops is suitable for growing most medicinal plants. In general, care should be taken to keep down weeds and ensure a good tilth. A medium dressing of farmyard manure is usually advantageous, although not actually necessary.

Drying of Crops.—The drying of medicinal herbs is a matter of great importance, and regular growers have proper drying plant, heated arti-

ficially, so that quantities of the drugs can be dried quickly and thoroughly in a current of warm air. Facilities for drying purposes are necessary to the grower of medicinal herbs. Glass houses could readily be converted into drying sheds, especially if heated by pipes. Drying could be done in half shade in fine summer weather by spreading thin layers of the leaves on sheets in the open, or on racks or shelves in a freely ventilated shed, turning frequently until quite dry. The leaves or flowers must be kept under cover at night or during rain. "Even colour" is best retained by quick drying, and the brighter the colour the more saleable the product. Those who intend to market dry leaves or flowers could gather and dry in small portions, which are more manageable. Roots present less difficulty in washing and drying.

The most important British drugs are dealt with briefly here, while a number of others are also mentioned, though their supply is more or less restricted.

The South of England is especially suited to drug-growing, and is further favoured in being close to the principal consuming market.

The greatest difficulty to be encountered by the grower will be to obtain sufficient seeds or dormant plants to start growing medicinal herbs.

ACONITE (ACONITUM NAPELLUS, L.).

The chief collecting centres for foreign Aconite root are the Swiss Alps, Salzburg, North Tyrol and Vorarlberg. Swiss supplies (which have come *via* Germany) may be cut off as well as the others. Supplies of Japanese Aconite root are plentiful, and Spanish root is also coming into the market, so that the demand for English Aconite will probably be restricted. The price of the Continental root is about 50s. per cwt., and Japanese (usually ascribed to A. Fischeri, Reichb.) about 35s. per cwt., while English is ordinarily worth 2s. per lb. Cultivation of Aconite has not paid in recent years, even with cultivated root four times the price of wild. Leaves are of little importance.

Cultivation.—The official Aconite (*Aconitum Napellus*, L.) grows wild in some shady places in the West of England and in South Wales. It prefers a soil slightly retentive of moisture, and among the drug farms the moist loam of Ampthill or the dark soil at Market Deeping proved most suited to Aconite cultivation.

Beds for growing Aconite are all the better for being shaded. The soil should be well dug, and pulverised by early winter frosts. The digging in of rotted leaves or stable manure is advantageous.

Aconite can be raised from seed, but it takes two or three years to flower. It is almost invariably propagated from the smaller (daughter) roots which develop at the sides of old roots. The underground portions of the plants are dug up in the autumn, after the stem has died down, and sorted over, the plumper roots being reserved for washing, splitting and drying to form the Aconite root of commerce.

Replanting is usually done in December or January, the young roots being planted about a foot apart each way. The young shoots appear above ground in February. Although the plants are perennial, each root lasts only one year. The autumn-dug daughter root crowned with undeveloped buds is official in the British Pharmacopœia, but German root is derived from plants gathered in flower. Aconite would grow luxuriantly in a moist open wood, and would yield returns

with little further trouble than weeding, digging up and drying. A great disadvantage of growing Aconite from seed is the uncertainty as to correctness of the species, an important point as regards medicinal activity. There are some sixty species.

BELLADONNA (ATROPA BELLADONNA, L.).

Prospects.—The bulk of the world's supply of Belladonna is derived from wild plants growing in quantity on waste, stony places in Southern Europe. The industry is an important one in Croatia and Slavonia (South Hungary), some fifty exporters being engaged in buying the root and leaves from collectors and exporting the drug chiefly to Würtemberg. The largest exporter in Slavonia sent out 29,880 lb. of dry Belladonna root in 1908.

Continued shortage will almost certainly exist during the next few years. If seeds are sown in October, a small crop of leaves may be obtained in the following year if plants grow strongly. High prices will probably continue until the root is dug three or four years hence. It is usually difficult to obtain more than £10 per acre for a crop of Belladonna, but those who can contract to deliver Belladonna next year should obtain more than this for the sparse first year's cutting.

Cultivation.—Belladonna is grown from seed, and an initial difficulty will be to obtain supplies of fresh fruits or seeds. The plant grows wild in the Southern Counties of England, especially near old ruins, but it has become much rarer of late years. The fruits ripen from August to October, and those who know the haunts of the plant might profitably gather fruits for sale. The seeds taken from the berries are washed in a sieve and dried.

Belladonna grows on most soils, but is partial to a chalky substratum. The seeds germinate slowly, and some autumn sowing is necessary, but sowing may also be done in spring. The seeds are drilled in rows 3 feet apart, using 2 lb. to 3 lb. of seed to the acre. A reserve of plants is also grown in seed-beds to fill in gaps due to dormant seeds and winter's losses. The seedlings are liable to injury by late frosts, and a light top-dressing of farmyard manure serves to preserve young shoots from injury during sudden and dangerous changes in temperature. Healthy young plants soon become re-established when transplanted, but require watering if the weather is dry at the time of transplanting. Great care must be taken to keep the crop clean in spring, or the seedlings may be choked by weeds.

The plants may be left 18 inches apart the first year, and by September the single stem will be 1½ feet to 2½ feet high. A gathering of leaves may then be made if the plants are strong. "leaves" meaning the broken-off tops of the plant. The coarser stems are left on the plant, and discoloured portions are rejected. Women are employed for gathering. Before the approach of winter, plants should be thinned to 2½ feet to 3 feet apart, or overcrowding will result in the second year, in which the plants will bear one or two strong stems.

The English crop is cut with sickles in the second year while flowering in June, and is usually carted straight to the factory for extract making (*i.e.*, before it has time to "heat"). The leaves (tops) lose four-fifths of their weight on drying, an operation attended with difficulty. Growers who intend to have their crop worked up into extract must arrange for delivery at the mills on the day it is cut, because heated material is useless for

extracting. With modern motor traction it should be possible to deliver twenty miles away very quickly.

The average crop of fresh herb in the second and third years is 5 tons to 6 tons per acre. A second crop is obtained in September in good seasons. The plant is dug or ploughed up during autumn in the fourth year, and the root is collected, washed and sliced to accelerate drying. In time of great scarcity it would probably pay to dig up root in the third year. Three parts of fresh root yield a little over one part of dry root. The greatest loss of plants is in wet winters. On the lighter soils there is less danger from winter loss, but the plants are more liable to damage from drought in summer on such soils.

(To be continued.)

BOOKS.

National Dahlia Society's Supplement.*—

The annual Supplement and Conference Report of this society is before us, and constitutes a useful addition to others which have preceded it. Quite fittingly in a prefatory note reference is made to the loss the society has sustained by the death of its president, Mr. George Gordon, V.M.H., who did so much for the advancement of the Dahlia as a garden flower. The tribute is accompanied by an excellent photograph of Mr. Gordon. A special value attaches to the present supplement, in that it deals with the extensive trials conducted during the year 1913 at Duffryn, near Cardiff; and Mr. Cory's observations thereon, which extend to all sections of the flower, will doubtless be perused with interest. The trials in question are the largest ever conducted in a private garden, and it should be remembered that one of its chief objects was to test the decorative or garden value of the flower. To this end Continental and home growers were invited to contribute varieties they deemed valuable for the purpose, the result being that between 7,000 and 8,000 plants in nearly one thousand distinct varieties were received. The report deals in detail with the numbers received in each section and those gaining commendation; hence its value. For example, 150 Collarette varieties were received and only twenty-three honoured. Complete lists of all so honoured follow in their sections, with colour and height. Mr. H. Shoesmith contributes a paper on "The Dahlia of To-day," which is well worth perusing. Included are photographs of Mr. Reginald Cory (in whose garden at Duffryn the 1913 trials were conducted) and of Mr. Joseph Cheal, chairman of committee.

Saxifrages.†—This handy volume, which, with appendix and index, extends to nearly one hundred and fifty pages, treats of one of the most important and, for the most part, fascinating families of hardy plants, one which, so far as the rock gardener and alpine lover is concerned, is as a treasure-house from which rich stores may be taken at will. The book, too, in view of the promised conference on the genus in 1915, comes at an opportune moment, though at any time it would have been welcome. It is, so far as we remember, the first of its kind in the English language, and now that it is an accomplished fact it will be welcomed

as "guide, counsellor and friend" by the thousands who now cultivate the many species and varieties the genus contains for the pleasure they afford. Bereft of its Saxifrages, the rock garden or alpine house would be poor indeed; and even these do not exhaust the resources of this valuable race of hardy plants. Others there are just as well suited as edgings to shrubbery borders, to woodland places and the bog garden; and it is these all-embracing characteristics, with simple cultural requirements for the most part, which places the genus upon the topmost rung of Popularity's ladder. Apart from an intellectual chapter on the "Saxifrages of the Pyrenees," by Dr. John H. Salter, and "Saxifrages in the Rock Garden," by Mr. R. A. Malby, the book resolves itself into a monograph of the genus, treating of the species in their several groups, of which fifteen, with an illustrated key, are given in its opening pages. In these chapters we have the essence and value of the volume backed by the authoritative experiences of the author at Kew, where for so many years he has cultivated an almost unique collection of these plants, and so well. Emanating, as it were, from such a source, the amateur will be relieved to learn that the descriptions are devoid of technicalities and couched in the simplest terms, and will be readily grasped by all. In an opening paragraph at the head of the more important groups and interspersed with the descriptions of some of the species are to be found concise cultural hints of some importance. Despite these facts, we should have preferred to see—and are of opinion that a greater service would have been rendered to the Saxifrage-loving public had there been—brief chapters devoted to "Cultivation and Propagation," to "Uses and Adaptabilities," to selections for "Grouping," "Colonising" or "Crevice Planting," and to other things. Chapters on such important matters would have tended to make a valuable work *invaluable* to the amateur, who, hungry and thirsting for such knowledge, is, after all, the only one to cater for, the specialist knowing these things by heart. In all, the book, according to the index, embraces upwards of three hundred species, varieties and hybrids, a number which, while demonstrating the importance and extent of the genus, is, even then, by no means exhaustive. But it gives of the best and, as the author points out in a prefatory note, is intended "to help the garden lover to become acquainted with the most important members of the family, so that he may be able to choose the best varieties, and, having chosen, to grow them successfully."

A few clerical errors, inseparable from a book when more than one writer contributes thereto, should be righted in future editions. At pages 101 and 128 appear "Haagei" and "Haagii"; at pages 103 and 129, "Obristii" and "Obristi"; at pages 108 and 123, "Dr. Ramsey" and "Dr. Ramsay"; and at pages 129 and 105 Sundermanni is rendered with one "n" and two "n's" in the final syllable. At page 22 "Guildford Seedling" is cited as the product of "S. muscoides var. atropurpurea," though the writer had it on the authority of the late Mr. Selfe-Leonard, in whose collection it originated, that it came as a "chance seedling from S. m. Rhei." "Faldon-side," again, at page 100, is cited as being of burseriana x retzioides parentage, whereas it occurred as a subsequent seedling from S. Boydii, as did S. B. alba and S. B. lutea, hence is only related to the above parentage in this connection. The parentage of S. bursiculata should have been

given as burseriana major x apiculata, its raiser's name "Jenkins," not "Jenkyns." These hybrid Saxifrages, with their known or presumed parentages arranged in a chapter apart, constitute a most interesting part of the book, an invaluable guide—if not quite infallible—to the student or worker in the same field, since, however large or extended this hybrid set might now appear to be, we lean to the view that the hybridist has only just commenced his work. The only thing we dissent from in the book is the author's recommendation (page 62) to "keep the rooted cuttings in their cutting pots over the winter," experience showing that much better results are obtained when the cuttings of these plants, in common with others, are potted off as soon as well rooted.

Some excellent illustrations in colour and monochrome are worthy of remark, and these, while a feature in themselves, serve to ornament a book of high importance to the lover of alpine flowers.

E. H. JENKINS.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

THE GREENHOUSE.

HEDYCHIMUM GARDNERIANUM NOT FLOWERING (C. G. O. B.).—We think that the probable cause of your Hedychiums failing to flower is that the rhizomes are not strong enough. This plant is as a rule far more satisfactory when planted out in a prepared bed in a sunny conservatory than it is when confined in pots, as in this way, especially if the shoots are crowded, it does not make growth sufficiently strong to flower. The plants at Kew referred to by you had been liberally treated in every way; that is to say, the shoots were limited in number, the pots large, ample stimulants had been given, and the plants derived a considerable amount of assistance from the warm yet stagnant water in which they were standing. We should advise you to remove the plants from the pans of water and gradually lessen the moisture at the roots till the stems drop away at the base, when the soil must be kept quite dry and safe from frost. Then early in the spring the plants should be repotted, using good-sized pots. A mixture of loam, well-decayed manure, with a little leaf-mould and sand, will suit them well. As the pots get full of roots, give liquid manure or some other stimulant freely. If you keep the soil dry, there is no need to knock the plants out of the pots. We have seen the Hedychium flowering freely out of doors in the neighbourhood of London, the plants being lifted during the winter

* "National Dahlia Society's Supplement." Published by the National Dahlia Society. Secretary, Mr. J. B. Riding, Chingford.

† "Saxifrages," by Walter Irving and Reginald A. Malby. London: Headley Brothers. Price 2s. 6d.

months and given the same treatment as Cannas. In the summer they were planted in an angle formed by two greenhouses, in which warm, snug spot they flowered freely. The soil was well dug and a liberal quantity of manure incorporated with it.

SCHIZANTHUS PLANTS FAILING (M. L. S.).—Your plants arrived in rather a bad condition, but we think they have been attacked at the roots by a fungus, probably a species of *Fusarium*, causing them to wilt in the same way as Tomatoes attacked by sleepy disease. It would be well to heat the soil thoroughly before sowing *Schizanthus* seed another year, so as to kill the spores of the fungus; and pots, &c., should also be sterilised.

TREATMENT OF HYDRANGEAS (M. G. B. C.).—You give us no idea of the size and condition of your Hydrangeas at the present time. At all events, the season is too far advanced for you to do anything before the winter. They should, if possible, be kept at that season in a position where they are just free from frost, but nothing more, otherwise they will not have the necessary period of rest. Then, early in the year, if the plants are large and bushy, any weak and overcrowded wood should be cut out, in order to throw the full energy of the plant into the stout terminal buds of the stronger shoots which can be depended upon to flower. If in your opinion the plants at that time need repotting, this should be done before the dormant buds burst, using for the purpose a good, fairly rich compost, such as two parts loam and the remaining portion made up of well-decayed manure, leaf-mould and sand. Where the plants do not need repotting, they should, from the time of starting into growth, be given occasional doses of liquid manure or some other stimulant. In order to turn the flowers blue, many preparations are used, with a lesser or greater measure of success. In some soils this is an easy matter, while in others it is difficult to obtain the desired shade. Two good preparations are sold for the purpose, namely, Azure, which is a speciality of Messrs. William Cutbush and Son of Highgate, and Cyanol, which comes from the Continent and can be obtained from horticultural sundriesmen. The presence of lime in the soil is very detrimental to the desired blue tint, hence the plants should never be given water that contains chalk. Rain-water alone should, if possible, be used. These preparations must never be applied while the soil is dry. The treatment, particulars of which are supplied with each preparation, should be commenced directly the plants are ready to start into growth.

INDOOR PLANTS IN BAD CONDITION (M. E. B.).—The portions of Palm leaf sent are very badly attacked by scale insects, which should have been destroyed when they were first seen, and not allowed to make such headway as they have done. It will be necessary to persevere in order to get rid of them, the best way being to sponge the leaves carefully on both sides with a strong solution of soft soap and warm water. This will tend to loosen the scale, which must then be removed with a pointed stick, taking great care not to scratch the surface of the leaf. This done, sponge over again with the solution; then rinse in clean water. The stems of the plant must also be treated in the same way, and a sharp look-out kept on the young leaves as they unfold. The fact that the other plants are smothered with green fly would indicate that they have been sadly neglected, for these pests should have been destroyed when first seen. They may be killed by fumigation, or more thoroughly by vaporising with nicotine if you have a place to isolate them when this is being done. Dipping in soft soap solution such as is advised for sponging the Palm will also destroy green fly. It is obvious that without an inspection of the plants and the conditions under which they are grown, it will be quite impossible for us to state the cause of the trouble and whether the potting soil is at fault. In any case, however, if you think the soil is unsuitable and decide to repot, it is too late to do so now. The better plan will be to wait till April. This last remark also applies to the *Aspidistra*, which should not be disturbed at this season of the year. Then, when the time comes round, the plant should be turned out of the pot and divided into as many pieces as there are crowns or tufts of leaves. If the basal portions of the long stems can be cut away without injury to the roots, it will enable you to work the tuft of leaves in the centre of the pot. With regard to *Aspidistras* behaving in this way, we find that there is a great deal of variation among individuals. We have had some plants for years, and while most of them are of good compact habit, one is no sooner potted than it makes tracks for the side of the pot and soon loses its symmetry. The name of the plant of which leaves are enclosed is *Anthericum lineare*, frequently known as *Phalangium lineare*.

FRUIT GARDEN.

PEACH BARRINGTON SPLITTING AND KERNELS DRYING (Barrington).—Late Peaches generally are liable to this defect, Barrington included. The cause is, we believe, to be found in the defective setting of the flowers. Lack of sufficient lime in the soil would, no doubt, help to this end. With such a heavy crop as your trees are carrying (and we presume it is the same in most years) the soil of the border becomes exhausted, not only of lime, but of most of its fertilising elements, and therefore it becomes necessary to top-dress the roots annually with the best new Peach soil. Before doing this, give copious and repeated waterings of manure-water to the borders as soon as the fruit is gathered. Attend carefully to fertilising the flowers with strong pollen from another variety, and do not crop too heavily.

PLUMS ATTACKED BY FUNGUS (Argyll).—The Plum is attacked by the fungus of brown rot called *Sclerotinia fructigena*. This fungus grows all through the

fruits, and fills them so full that they become mummies and remain on the tree the winter through. It also attacks the shoots. Both diseased shoots and mummy fruits should be removed and destroyed in the winter pruning, for it is from these sources that the fungus spreads to flowers and foliage in the spring and later to new shoots, &c. It would also be well to drench the tree with a solution of lb. of copper sulphate in twenty-five gallons of water during the winter, and just before the buds open, and again after the petals fall, to spray with Bordeaux mixture.

CHERRY TREE ON WALL NOT FRUITING (East Anglian).—Your better way will be to take up the Cherry tree, and if it is fairly young and in good health, replant in some other part of the garden, not necessarily against a wall, adding a liberal quantity of lime to the soil before planting. In place of the Cherry a young fan-trained Plum tree of the old Green Gage variety should be planted. You will find this will do well and give you in due time a better return than the Cherry. Trench the soil 2 feet deep where the tree is to be planted, and add a small barrow-load of turfy loam and a quart of bone-meal. The top roots of the tree when planted should not be buried more than 4 inches deep with soil. Tread the soil firmly before planting and afterwards. Plant when the soil is fairly dry.

MISCELLANEOUS.

TROUBLESOME WEED (Enquirer).—The weed is the Wood Horse-tail (*Equisetum sylvaticum*), one of the most pernicious weed pests of the garden, and certainly one of the most difficult to eradicate. So far as the path is concerned, that could be successfully dealt with by applying weed-killer at double strength during autumn and winter. If you gave two applications from October to February and another in spring when growth usually begins—all during moist or wet weather—we think you would quite eradicate it. For the garden soil the only possible way is to fork it out—the difficulties in the way of effecting a clearance being the deep-rooting character of the weed and the brittleness of its roots. As every atom of the latter is capable of giving rise to a new plant, the need for thoroughly cleaning out every particle of it is obvious.

WORMS IN MANURE (E. B. W.).—Worms and other insect life in manure may be destroyed by turning the manure and during the process mixing unslaked lime with it. The lime must be evenly distributed throughout the mass. The Apple weevil, the larvæ of the Codlin moth, can be checked by adopting preventive measures during the winter and early spring. During the winter the insects, of which the larvæ in the fruits is one stage in their life-history, are often found sheltering beneath rough bark. They may be destroyed by removing the rough bark and spraying the trees, when leafless, with a caustic wash. This may be made by taking 2lb. of caustic soda (98 per cent.) and dissolving it in a wooden vessel in three gallons of water. Then in another vessel dissolve half a pound of soft soap in a gallon of water, add five pints of paraffin, and stir until an emulsion is formed. Add the two mixtures together, make up to ten gallons with clear water, mix well and apply on a calm day. Afterwards the trees may be dressed with a lime wash. Any fruits containing weevils should be removed from the ground and destroyed, so that the weevils or caterpillars cannot change into mature moths. There is a very small choice of shrubs for planting in dense shade. A few of the best are common Holly, *Aucuba japonica*, Oval-leaved Privet, *Rhododendron ponticum*, *Berberis Aquifolium* and *Ruscus aculeatus*.

LAYING OUT A GARDEN (May Blossom).—It is not possible to introduce much originality into a narrow stereotyped plot of garden ground, though it may be made useful in the following manner. Divide off a third part, or more if you wish, at the north-west end for a vegetable plot. Mark the division by a trellis or lattice fence with a gateway. Encompass the central vegetable plot by a 3-feet-wide path on all sides and at 3 feet distant from the boundary fences. This will give you border room on three sides at all points save where the fowl run exists. These borders may be turned to account for growing bush fruits, Currants, Gooseberries, Raspberries, &c., also herbs, salads, Onions and Rhubarb. Four feet from each corner of the central vegetable plot plant Cox's Orange, Stirling Castle, Lane's Prince Albert and Worcester Pearmain Apple trees, i.e., two cooking and two dessert sorts. At the flower garden side of the lattice-work fence plant *Hiawatha*, *Tausendschön* and its white variety, also American Pillar Roses, to form a screen—this instead of the suggested Rose hedge, for which we think there is little room. In the flower garden portion the side paths may be waved or straight, though in the confined area named the latter would be best. Traverse the turf plot by a path as in the vegetable garden, though of greater width, and arrange crescent-shaped beds of Roses near each of the corners. The side borders could be devoted to flowers, perennials, bulbs, Sweet Peas, Carnations and annuals. These borders might have a turf verge. The best self-clinging creeper is *Ampelopsis Veitchii*; the best evergreen creeper, *Hedera palmata aurea* (Ivy). The prize-winning plans published in our issue for October 17 should assist you.

NAMES OF FRUIT.—R. M. E. Y.—Lamb Abbey Pearmain.—E. Robinson.—1, Belle Julie; 2, Duchesse d'Angoulême; 3, Broom Park; 4, Glou Moreau; 5, Josephine de Malines; Apple, Tibbett's Pearmain.—H. H. Shaker.—Kingston Black.

NAMES OF PLANTS.—M. A. Gordon-Dill.—*Aster Novæ-Angliæ* var.; it is an unnamed seedling and should be increased by division.—John Harris.—1, *Verbena venosa*; 2, *Streptosolen Jamesii*; 3, *Cornus capitata*; 4, *Cestrum Newellii*; 5, *Juniperus chinensis albo-variegata*; 6, *Erythrina Crista-galli*.—X. X.—1, *Daphne Cneorum*; 2, *Polygonum baldschuanicum*; 3, *Daboecia polifolia*; 4, *Veronica speciosa* var.; 5, *Polygonum amplexicaule*; 6, *Saxifraga cordifolia*; 7, *Euphorbia Cyparissias*; 8, *Erica vagans*; 9, *Genista hispanica*; 10, *Erica carnea alba*.—J. B.—1, *Cupressus lawsoniana* var. *alba spica*; 2, *Thuja orientalis*; 3, *Sequoia gigantea*; 4, *Abies Pinsapo*; 5, *Chimonanthus fragrans*; 6, *Cistus salvifolius*.—Mrs. Lawrence, Heyworth.—*Acer monspesulanum*.—Torquay.—*Spiræa prunifolia*.

SOCIETIES.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE second meeting of the winter session was held in the East Anglian Institute of Agriculture on Friday, the 23rd ult. The president, Mr. E. H. Christy, occupied the chair, and about thirty-five members were present. Mr. C. Wakeley, staff lecturer at the Agricultural Institute, gave an interesting lecture on "The Vegetable Garden and its Present Importance." The lecturer drew attention to the pamphlets, &c., which were now freely circulated, and the advice given with regard to the cropping of every available piece of land with vegetables, in order to ensure a good supply during the war period. He pointed out that caution should be displayed before acting on the advice given, because it was doubtless some two months ago when the advice was written, and therefore some of the cultural operations advised, if carried out now, would be useless. Continuing, the lecturer stated that in the majority of gardens, allotments, &c., little provision was made for the winter crops. A hearty vote of thanks was accorded Mr. Wakeley at the conclusion of the discussion.

NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the floral committee was held at the Essex Hall, Essex Street, Strand, London, W.C., on Monday, the 26th ult., when a few novelties were staged for awards. In addition Messrs. W. Wells and Co. of Merstham exhibited a collection of two dozen Japanese blooms, for which they were awarded a large silver medal. A silver medal was granted to the Misses Price and Fyfe, East Grinstead, for an exhibit of single and Japanese varieties. The following novelties received awards:

Undaunted.—A large Japanese variety of good depth and size, the broad florets being coloured rich amaranth, with silvery reverse. First-class certificate.

Keith Luxford.—A large, creamy white Japanese flower with excellent florets and plenty of substance. First-class certificate. Both the foregoing were shown by Messrs. W. Wells and Co.

Exmouth Yellow.—This is a splendid single variety of excellent shape and rich yellow in colour. First-class certificate. Shown by Messrs. Godfrey and Sons, Exmouth.

BIRMINGHAM AND MIDLAND COUNTIES GARDENERS' ASSOCIATION.

SOME HINTS ON CHRYSANTHEMUMS.

IN the presence of a large gathering, on Monday, the 19th ult., Mr. Woolman, jun., Sandy Hill Nursery, Shirley, read a very practical and equally entertaining paper, entitled "The Chrysanthemum for Decoration and Exhibition." In order to emphasise the many changes and stages of development which have occurred during the evolution of this flower, he commenced his discourse by reading several interesting extracts from a chronicle of its history. This began at the period when the Chrysanthemum belonged solely to the Orientals. From the time of exportation from China and introduction into civilisation—whence it has reached its present magnificent state of perfection—it has experienced many almost romantic phases of alteration; thus we have to-day blooms of Japanese and incurves that are, according to their species, ponderous in dimensions. Next, dealing with its actual cultivation, he dwelt in graphic detail with all the intricate essentials that concern its growth. First came the initial cutting stage; then the second potting; lastly, the third and final potting. In each case (taken from his own personal method of procedure) he proffered many suggestions as to the sizes of the pots and the preparation of the different composts. At certain times, he added, too, a little feeding would be helpful; but much of the non-success in Chrysanthemum-growing could, he urged, be attributed to the far too prevalent abuse of over-feeding. In considering the Chrysanthemum for exhibition, it is a mistake to think a previous year's record of the maturing of the buds could be used as a precedent for forecasting the results in a succeeding season, as the fickle English climate almost entirely will debar the grower from it. After referring to several well-known favourite blooms of different shades, he concluded his address by making a few additional remarks upon the twelve specimen blooms he had staged within the room. Subsequently, these splendid samples of his efforts were sold, at the suggestion of Mr. Woolman, sen., the proceeds, amounting to 5s., going to the Prince of Wales's Fund, this making the evening's collection up to, in all, 19s. 3d. The audience, before dispersing, expressed their appreciation of the paper by a cordial vote of thanks, proposed by Mr. Cryer and seconded by Mr. Markham.

THE GARDEN.

No. 2243.—VOL. LXXVIII.

NOVEMBER 14, 1914.

NOTES OF THE WEEK.

To Our Readers.—Soon after the outbreak of war we made an appeal to our readers to support the nursery, seed and bulb trade as much as they possibly could by purchasing, if not the usual quantity, at least a good proportion of the Roses, fruit trees, plants, seeds or bulbs that would be bought under normal conditions. It is, therefore, most gratifying to learn from a number of our advertisers that the appeal has borne fruit, and that our readers have realised that, in buying plants and seeds for their gardens, they are providing employment for a thoroughly deserving and hard-working class. We most earnestly hope that the good example thus set will be considerably extended. It is far better to provide work by spending money wisely than to give donations to relief funds, deserving as the latter undoubtedly are. We hope that our readers will remember that every care is taken to exclude unreliable advertisers from our columns, and that those whose announcements do appear can be relied upon to give satisfaction.

An Autumn Snowdrop.—Probably the finest of the autumnal Snowdrops is the form of *Galanthus octobrensis* which is shown in the accompanying illustration. It differs from most of the other autumn species of *Galanthus* in its more robust growth, and also in the fact that its tube, as the illustration shows, is deeply marked with green instead of having only the apical blotch of *G. nivalis*, generally seen in the autumn Snowdrops. It comes from Albania, where it was found by Lord Walsingham in 1875. As the late Mr. James Allen, whose paper on the Snowdrops appeared in *THE GARDEN* of September 19, 1891, remarks, it is of slow increase. Mr. Allen also remarked that it was of delicate constitution, and that Mr. W. B. Boyd found it desirable to lift it and give it a rest after flowering. We have not found this necessary, but it is growing on a dry part of the rock garden where the soil is partly permeated by shrub roots, and where it is naturally well rested in summer.

Christmas Roses.—Where these are grown, a little attention to them at the present time is well repaid later. The top-dressing that was given after the last flowering season should be removed, also any leaves that have collected among the plants. Prick up the soil very lightly with a hand fork, and an application of Clay's Fertilizer or guano will be found very beneficial. As the

purity of the flowers is often marred by mud splashes, hand-lights or frames should be placed over the plants. Air must be freely admitted and the lights removed during mild, dry weather.

An Ornamental Berried Tree.—Although it is ninety years ago since *Cotoneaster frigida* was first introduced from Nepaul, it has not received the attention to which its merits entitle it. For planting in exposed situations it is most

A Basket of Fruit Realises £550.—A sale of a basket of various fruits on behalf of a fund for the purchase of a Red Cross motor ambulance took place in the Commercial Sale Room, Glasgow, on November 4, and realised £550.

Variegated Trees and Shrubs.—When trees and shrubs are being planted for the ornamentation of the pleasure grounds, care should be taken to select a sufficient number with variegated foliage.

There are so many species that have forms of this nature that it should be an easy matter to make a suitable selection. In planting, a much better effect is obtained if the golden variegated forms are planted in full sun, planting the silver variegated ones in the shade.

How the Temperate House at Kew was Completed.—The following extract from the current issue of the *Kew Bulletin* will, we think, be of interest to the numerous visitors who are acquainted with the famous Temperate House at Kew. In writing to the Director at Kew, Mr. Austen Chamberlain says: "I do not know whether you are aware of the full story of the completion of the Temperate House. One afternoon in the House of Commons, Sir William Harcourt, then Chancellor of the Exchequer, asked my father to pair with him for dinner. My father replied that he was afraid he could not do that as he was intending to speak on the motion which was then before the House. 'Oh!' said Sir William, 'don't do that, for if you speak I shall have to stop and reply, and I particularly want to keep my engagement this evening.' 'Well,' replied my father, 'I will make a bargain with you if you like. If you will agree to put money in next year's estimates to complete the Temperate House at Kew, I will pair with you for as long as you wish.' And Sir William Harcourt, nothing loath, assented. My father at once communicated this to Sir William Thiselton-Dyer; but when the next year's estimates came out Sir William found to his horror that the money for the Temperate House had been struck out. He appealed to

my father, and my father to Sir William Harcourt, and the Chancellor, recognising that a bargain was a bargain, directed that a supplementary estimate should be brought in to provide the promised funds. I once suggested to the present Mr. Lewis Harcourt that this characteristic Parliamentary anecdote should be recorded on the Temperate House itself."



GALANTHUS OCTOBRENSIS, A SNOWDROP THAT FLOWERS DURING OCTOBER AND NOVEMBER.

valuable, while its growth being rapid, its habit close and shelter-giving, and its forming a beautiful-shaped specimen even in almost pure clay are worth bearing in mind. The flowers, which are in creamy white corymbs, are followed by a bright display of scarlet berries, making the tree particularly interesting from September onwards.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Peas and Young Vegetable Marrows in November.—As a proof of the mildness of the autumn weather, we are able to gather Peas Ne Plus Ultra in November, and also Vegetable Marrows in a young state, not old and hard as they are when matured. I have, twice in thirty years, had the experience of growing Pea Ne Plus Ultra in freshly broken land with great success, and in old vegetable quarters, where the soil was full of humus, without real success. In the latter case the seeds rotted in the soil, in both high and low positions, to a big percentage. In the new soil all seeds germinated and the plants flourished. Those that did grow in the old garden loam lacked vigour. The seeds were not faulty. The Marrow plants were raised late in the summer, and have fruited well very late.

—G. GARNER.

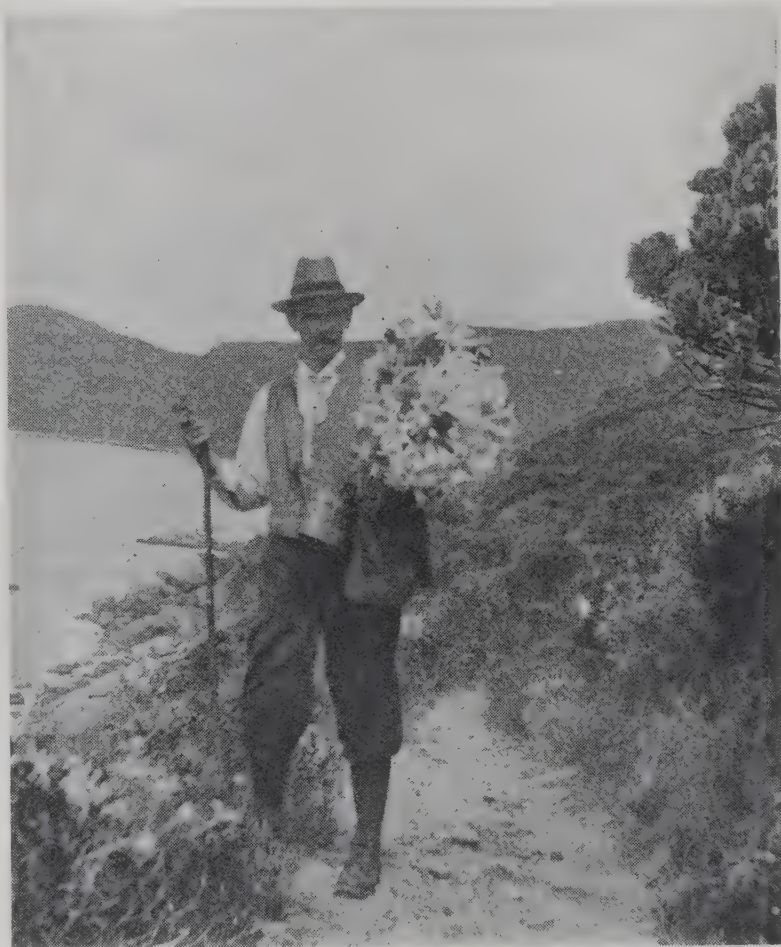
Apple Trees in Bloom in October.—I have recently gathered some ripe Apples off a young tree which is bearing young fruits about the size of small Walnuts, and trusses of flowers of the most lovely deep colour. In its proper season this variety bears very large, beautiful flowers, but I have not seen larger blossoms than the ones open on October 28, nor richer in colour. There are also flowers on other trees.—G. G.

Salvia Fireball.—This brilliant scarlet *Salvia* has made such a brave show here this past season that I cannot refrain from penning a line in its favour. The plants were raised from seed sown in the first week of February, and were in due course potted off into 3-inch pots and hardened off along with other bedding plants. In the last week of May they were planted out in a border filled chiefly with half-hardy annuals. For the first week or two the plants made little progress, but by the middle of July they were flowering freely, and from that time up till the date on which I am writing (October 19) they have made a dazzling show. I have taken a batch of cuttings, and hope, during the next season, to make a comparison between plants raised from cuttings and those raised from seed. The plants have attained a height of 18 inches or more on deeply cultivated ground.—CHARLES COMFORT, *Davidson's Mains, N.B.*

Recipe for Medlar Jelly.—In THE GARDEN for last week Mr. Molyneux gives us a recipe for Quince jelly. Another fruit, which is generally wasted, but which makes a most delicious jelly, is the Medlar. Well-made Medlar jelly is in flavour like the best Guava jelly, and quite its equal as a preserve. The fruits should be fully ripe, in the same condition as when used for dessert. Prepare the fruits and boil them with enough cold water to cover them, and to every two dozen Medlars allow the thin rind and strained juice of half a Lemon. Boil well, and strain without any pressure then put the juice in the pan with its weight of sugar, and add more strained Lemon juice in the proportion of one Lemon to every fifty Medlars. Boil and keep skimmed. The jelly should be quite clear, but if the least

sediment is put in, it will fail in this respect. Time, about an hour and a-half to boil, but it varies. Great care should be taken that it does not burn.—C. B.

Mistletoe Growing on Ampelopsis Veitchii.—This parasite grows on many more kinds of trees than is generally supposed, but I have never seen or heard of it being found growing on *Ampelopsis Veitchii* before. When at Rood Ashton, near Trowbridge, in the early part of October, I saw a fine plant growing on this *Ampelopsis*. The mansion is covered with the climber, and near the top, on the south side, is a fine plant of Mistletoe, sufficiently large to be seen at a long distance. Mr. Strugnell, the gardener, chronicled the incident in one of the gardening journals early in the year. When we were looking at it, he remarked that it had made considerable growth this season. Naturally, many may ask how this could have got into such a position. Un-



WILD BELLADONNA LILIES THAT WERE GATHERED IN SOUTH AFRICA.

doubtedly from some bird carrying the berries from bushes on trees near by in the park. Some fifty years ago, when a youth in these gardens, I well remember how abundantly Mistletoe could be seen in the fine old Limes and Thorns in the park. I have not seen them so fine anywhere since. I noticed that several of the Thorns where it grew best had gone, and some Limes had been cut down.—JOHN CROOK.

When to Plant Tulips.—"Observer," writing in THE GARDEN for October 31, page 528, thinks he has caught me tripping, and in a way I confess that my advice given on this subject in your columns a few weeks since and the advice given in our bulb catalogue may seem at variance, owing to the wording of the same, which I admit to be faulty, and am grateful for having it pointed out. On the other hand, if "Observer" will look again at the page he quotes, he will see that the heading is for bedding Tulips, and the little bit about home-grown Darwins was only illustra-

tive of a certain point. The planting-time given was meant to refer to bedding Tulips only. It is quite possible that these (bedders) might be benefited by earlier planting than October or November, but it would be obviously unwise to advise people to plant bedding Tulips at a time when, in the average season, their beds would still be bright with summer plants. My own practice in planting several acres of Darwin and other late-flowering Tulips is to begin as soon as the Daffodils are in, which is generally about the first or second week in September. This year we began a little later, September 22, and finished on October 9, and I intend to stick to this until experience teaches me that later planting is better for the crop of flowers and bulbs. Up to the present I am fully satisfied that early planting is better than late. If "Observer" will refer to our catalogue next year, I hope he will find the advice given as to the time of planting so clear that no one can mistake the meaning of it.—

J. DUNCAN PEARSON (of the firm of J. R. Pearson and Sons), *Lowdham, Notts.*

Habitat of Amaryllis Belladonna.—I noticed that you mentioned in your issue of October 17 the flowering of the *Belladonna Lily* at Kew and in Ireland this year, and your correspondent Mr. Bryan states that this plant is supposed to come from the West Indies, and to have been introduced to South Africa from there, as it has never been found growing wild in South Africa. I am sure he is mistaken in thinking that it has never been found growing naturally in South Africa. It is certainly indigenous on the mountains of the Cape Peninsula. I have found it growing there in great quantities, and enclose a photograph showing a cluster of these flowers which had just been gathered on the adjoining hillside.—PERCY A. MOLTENO.

— Your correspondent Mr. Samuel Bryan, on page 502, says that "all botanists agree that *Amaryllis Belladonna* was introduced into the British Isles from the West Indies in 1712, and it is very probable it was brought from England to the Cape of Good Hope, but we have no authentic information as to its ever being found growing naturally there." The term "all botanists" is too sweeping an assertion, for in the "Kew Hand List of Tender Monocotyledons" it is

stated to be a native of South Africa. Surely Kew contains some botanists worthy of being included in the expression "all."—H. P.

Finger and Toe Disease in Green Crops.—The article by "A. E. B." in your issue of October 24, page 519, should be helpful to all who have to contend with this foe. In addition to the remedy given, I may add that, having to deal with soil where this is very troublesome, I have found several things helpful to check the pest. For many years I was quite in the dark as to the cause (which is of the first importance in dealing with all diseases, &c.). Having realised its nature, the question of a remedy arose. I have come to the conclusion that where green crops have to be frequently planted on the same soil, trenching the land every two years 2 feet deep and planting the same season as this is done is one of the best methods to keep it down, and in time I believe would eradicate it out of the soil. About two years ago, when at Sutton Place, near Guildford, while going

through the kitchen garden with Mr. Goatley, he told me that when he took charge there this disease was most troublesome, but by continually trenching the land he rarely saw a clubbed plant. Although a dry summer I could not see one. About four years ago, on some land I work I had a portion trenched 2 feet deep. On this all sorts of the Cabbage family were sown, and I did not see an infected plant that season.—J. CROOK.

Roses and Mildew.—Although I am afraid "Somerset" might as well ask for Roses immune from attacks of green fly as from mildew, I am sure some varieties are more prone to the mildew trouble than others. In the Rose notes which are published in THE GARDEN from time to time it is frequently mentioned that most Roses with dark green, leathery foliage are very free from mildew. My own experience bears this out, and Mme. Ravary, Le Progrès, Mrs. David McKee, Prince de Bulgarie and Mme. Melanie Soupert are with me quite satisfactory. Although their foliage is not so smooth and thick, the following are also very free from mildew: Mme. Abel Chatenay, Caroline Testout, La Tosca and Frau Karl Druschki.—CHESHIRE.

— I have read lately with interest some letters in THE GARDEN about mildew on Roses and the apparent difficulty of dealing with this plague. I sympathise with the gentleman who does not want to spray his Roses once a week all through the season. But what is to be done to large climbing Roses—Maréchal Niel, Rêve d'Or and Celine Forestier? The latter began it in the early spring, and was so bad that it had to be removed. These were on the south side of the house. On the north side Gloire de Dijon was barely touched by it. The ramblers all had it badly, and Tausendschön was the worst of the lot. Of the bush Roses Lady Ashtown was the worst, Mrs. David Jardine next, then Laurette Messimy, then Mme. Ravary, then La Tosca, then Pharisæer. General Macarthur and Comtesse du Cayla were practically untouched, and Perle d'Or absolutely untouched (twelve of them). William Allen Richardson and a Yellow Banksian are also untouched. Caroline Testout in standard form was ruined.—C. AMBROSE, Brookwood, Surrey.

— Lieutenant Chaure is a red Rose which, I venture to predict, will soon be in every Rose garden. We are badly off for red Roses of the Hybrid Tea class, and one that has all the excellent characteristics of Lieutenant Chaure cannot for long be neglected. Your correspondent "Somerset" asks for names of Roses which are mildew-proof. I will not go so far as to claim that Lieutenant Chaure is "proof," but in a year when Roses have been badly attacked in most gardens by mildew and black spot, it has, in my garden, been practically free from both diseases. For the information of those who have not got this Rose, I may add that it was sent out by M. Pernet-Ducher in 1910. Its reputed parentage is Etoile de France × Liberty, which is not calculated to impress one with its hereditary virtues! It has not, however, the faults of either parent. While not being particularly full, as exhibitors count fulness, it can be grown right up to exhibition form. Its stout, deep petals stand well, and the Rose when cut seems to last longer than many Roses of greater substance. It opens well in all weathers—a trait it certainly does not inherit from Etoile de France—flowers very freely and continuously; and has a delightful fragrance.

In Mr. Mawley's special audit of twenty newer Hybrid Teas, given in this year's "Rose Annual," it only came out nineteenth in the voting. This is surely too low a place. I have found it a better and more reliable Rose than either Edward Mawley or Leslie Holland. The colour may be described as a velvety crimson red, which, I think, it retains longer than most reds. Its growth is strong, even and compact, which makes it an admirable Rose for bedding purposes.—CHARLES H. RIGG, The Grey House, St. Mary Church, South Devon. [We quite agree with our correspondent in his praise of Lieutenant Chaure. We have found it an excellent Rose.—ED.]

— I am glad to note "Somerset's" few words upon this on page 528, issue October 31. A good many Roses are claimed as mildew-proof; but while a large number are little affected by this disease, unless in exceptionally uncongenial conditions of weather and extremes of temperature, I fear we cannot claim absolute exemption. From many years' observation I find the first few named below the freest of any: Duke of Wellington (it is curious that Fisher Holmes, in many other respects similar to Duke of Wellington, should be so subject to this disease), Ulrich Brunner, Arthur R. Goodwin and its grand yellow sport J. F. Barry are quite free here. Mme. Ravary, notwithstanding its beautiful soft and bronzy foliage, is remarkably free both in town and country. Melody, Mrs. Cornwallis West, Rayon d'Or, W. E. Lippiatt and Mme. Constant Soupert are very seldom touched. I also find Boule de Neige, Coquette des Blanches and Perle des Neiges beautifully free among the pure whites. The freest among our climbers are Félicité Perpétue and the three wichuraianas Alberic Barbier, Gardenia and Jersey Beauty. That grand all-round climber and pillar Rose American Pillar is as free as anything here. A good climber seldom touched is found in Excelsa. A few others scarcely ever mildewing with me are Alfred Colomb, Duke of Edinburgh, Captain Christy, Hon. Ina Bingham, La Tosca, Mrs. Alfred Tate, Mrs. Amy Hammond, Mrs. David McKee, Mrs. Frank Workman, Mrs. Theodore Roosevelt and Zephyrine Drouhin. Most of the Penzance Briars, especially the beautiful Lady Penzance, are free; also the Scotch Briars and Rugosas. Among the continuous-flowering Dwarf Polyanthas, too, there is very little mildew, if we except Mme. N. Levavasseur, which I have found very bad in most seasons.—A. P., Uckfield.

Francoas as Hardy Plants.—For the last two or three years we have utilised Francoas for garden decoration in the open air, retaining them in the ground during the winter without any protection. The site is a sunny one, but open and windswept, and the soil is loam resting upon heavy clay, hardly the ideal for Francoas in the winter according to general ideas; but my experience of them has been so good that I would urge garden-lovers to give the Francoas a trial in the open garden. The forms used have been Francoa ramosa (the charming white-flowered Bridal Wreath), F. appendiculata and F. sonchifolia, the pinkish forms, which seem to be equally hardy. Out in the open the mounds of foliage are very compact and close to the ground, and the wealth of blossom is immense, giving a continuous display of the dainty flower-spikes. Exactly how much frost they will stand I cannot say, but I remember a bed of F. sonchifolia coming safely through the last severe winter experienced in the South of England.—P. S. HAYWARD.

TEMPORARY WIND SCREENS IN GARDENS.

IN many gardens, and particularly those near the East and South-East coasts, it is impossible to grow a number of plants successfully unless a screen of some kind is provided to break the force of the keen, biting winds of winter and early spring.

These winds, if allowed to ravish an exposed garden unchecked, often do far more harm than the severest frost, and this is particularly noticeable during the early months of the year, when a brief spell of mild weather induces buds to sprout prematurely. In gardens which have been established for some years, and where it is known that dangerous winds prevail in certain quarters, a permanent screen in the form of a belt of Scotch Pines, or a thick hedge of Yew or Berberis, will have been planted; but even in such instances temporary screens such as I have in mind are most useful for protecting beds or groups of plants at those times when they are most susceptible to injury. In these situations a permanent screen would not be permissible, inasmuch as it would not be required for more than a few weeks of the year, and during the remainder of the time would be quite out of place, if not an actual eyesore. Daffodils, Tulips, particularly those of the Cottage and Darwin sections, early flowering shrubs, such as Magnolia stellata, and choice fruit trees are plants that occur to mind as needing temporary shelter of the kind mentioned.

Although there are several proprietary articles that answer very well as temporary wind screens, those who live in the country may well utilise the material that Nature in most districts provides so lavishly. In modern gardening, as in most other things, there is too great a tendency to ignore natural material, and to rely upon that which is manufactured. The latter may answer the purpose for which it is intended very well, but it never appears so much in keeping with natural subjects as the protective material that can be had for the culling from our hedges, commons and copses. The most serviceable natural wind screens for garden purposes that I have seen took the form of withy hurdles, the Hazel and Willow withes being cleverly plaited so that when finished each hurdle was about three feet high and five feet long. These screens would last in good condition several years, but in a small garden the storing of them during the summer and autumn months proved somewhat embarrassing. A stout stake thrust well into the soil on either side of the hurdle, and at each end, held it firmly in position when required for shelter.

Of a more temporary character were screens of dry Bracken gathered from a copse near by. This was made into screens of about the same size as the withy hurdles by running stout branching sticks along either side of the Bracken and lashing them tightly together with stout tarred string or Cocoanut fibre rope. A long, pointed stick of some hard wood, with a large eye near the point similar to a sewing-machine needle, was used for pushing the string through the Bracken, so that the sticks on one side of the screen were firmly tied to those on the other. It is surprising how quickly a couple of labourers who are used to hedging work will make a number of these screens, which will last good a whole winter and spring, and which can be used for farm as well as garden purposes should the necessity

for doing so arise. The screens could, of course, be made any size that is required, but it is not often that any of a larger size than that named are needed, though some smaller are useful.

Where Bracken is not obtainable, there is usually an abundance of other material to hand. Heather or Ling answers well, and long grass such as is trimmed from the sides of hedgerows may also be requisitioned, though there is in this case a danger of weed seeds being distributed over the garden. Gorse and Yew branches make excellent wind screens, and although the first-named must be bound together as advised for the Bracken, the Yew branches can, if necessary, be used separately, one or two thrust well into the soil on the windward side of some choice plant providing a screen that is at once effective and natural in appearance. Branches of Scotch Pine, Berberis Aquifolium, or, indeed, those of any evergreen that is present in sufficient quantity, may be utilised in like manner. In the seed-growing districts of Essex the hard, wood-like stalks of Carrots that have been grown for seed are used largely for making screens for agricultural purposes, these being lashed together with sticks similar to the screens of Bracken. They are hard and last a long time if kept straight and tightly tied, and would be equally as valuable in the garden as on the farm. No doubt in various counties there are other kinds of material that could with a little ingenuity be utilised for temporary wind screens, the use of which may mean the difference between seared and blackened foliage and healthy, free-blossoming plants. Attention is drawn to these screens now while the material is available. The making of such protections from wind provides work for the men at a time when little else can be done.

B. G.

NEW HERBACEOUS BORDERS.

HOW TO MAKE AND PLANT.

WHILE we have fresh in our minds the different herbaceous borders as they have appeared during the past summer months, we should make our plans for the construction of new ones. This



A BORDER OF MIXED FLOWERS AND SHRUBS. NOW IS THE TIME FOR PLANTING.

refers to cultivators who do not possess such borders and to those who do possess them but wish to make new ones or renovate existing borders. The preparation of the soil, the selection of plants and their disposition in the borders are the three principal points that the cultivator must pay the closest attention to when engaged in making the new borders.

Positions for the Borders.—Ideal ones are not available in every garden, and so the most must be made of the best ones. The following positions are good ones, namely, (a) in front of a wall facing south, south-west and south-east; (b) on one or both sides of a garden path running north and south or east and west; (c) in front of a gently winding shrubbery.

Positions that are Unsuitable.—(a) Under rows of fruit trees in the vegetable garden, but

suitable if the trees are far enough back from the path in the case of bush and pyramid-shaped trees. Espalier-trained fruit trees, distant from 8 feet to 12 feet from the path, form a good back-

ground to herbaceous borders. (b) Under large deciduous and evergreen trees growing near the edges of shrubberies, as not only do their roots rob those of the herbaceous plants, but their branches also prove inimical to their welfare. (c) In very shallow, poor soils, situated also on high ground. If there are no means of deepening and enriching such soils, the plants fail wholesale after the month of June.

How to Prepare the Soil.—The present is a good time for the trenching of the soil, so as to have it in fit condition for the plants in the course of a week or two. Whether broad or narrow, the borders should be trenched by commencing the work at one end and finishing at the other. A trench must be opened and the soil wheeled to the other end for filling up at the finish. Dig the soil at least 2 feet deep, but keep the subsoil below, breaking it up thoroughly. Use good manure, partly rotted, and well mix it with the soil just below the surface and not deep down, as the plants could benefit little if it were thus placed, the nutriment being washed down out of the reach of their roots.

How to Plant.—This and the arrangement of the plants are two items of great importance, as the work should be done so as to provide an unbroken supply of blossom during the greater part of the year. There are two ways of marking out a border for the plants, as shown in Figs. A and B, respectively. In every instance the

tallest-growing kinds of plants must be allotted the back portion, the medium the centre, and the dwarf the front. There will never be a uniform height that will make all plants have a stiff appearance, as some will always vary in strength and height. Fig. A shows at No. 1 the back part marked out formally for clumps of such plants as Michaelmas Daisies, Delphiniums, &c.; No. 2, large clumps of Phlox; No. 3, bulbous plants in clumps, such as Gladioli; No. 4, the smallest growers, such as Alyssums, Anemones, Armerias, Arabis and dwarf Campanulas; No. 5, Veronicas and the medium kinds of Aster, such as A. acris, A. Amellus, &c. A bed of this kind would have a bold appearance when the plants in it were established.

Fig. B shows a bed which would be filled with much less formality—smaller clumps and greater mixture. The dotted lines drawn through the

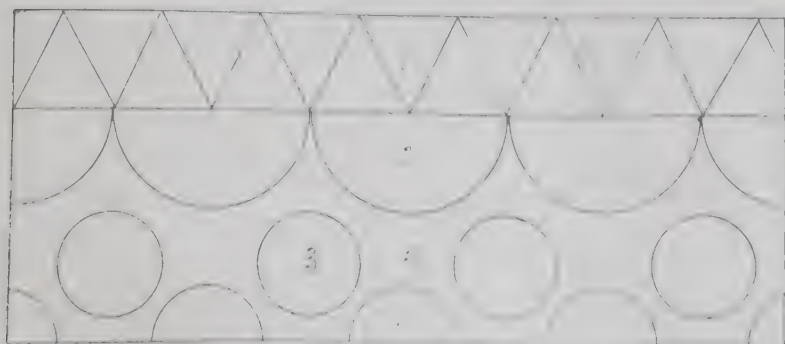


FIG. A, SHOWING ONE METHOD OF PLANTING HERBACEOUS AND BULBOUS FLOWERS.

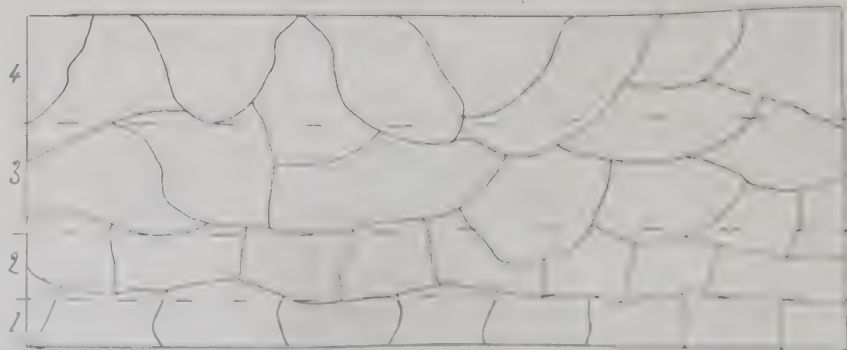


FIG. B.—A LESS FORMAL METHOD OF PLANTING. FOR DETAILS SEE TEXT.

bed show, however, how the cultivator must arrange the plants, namely, No. 1, dwarf; No. 2, the taller of the accepted dwarf kinds; No. 3, those of medium height; and No. 4, the tallest. If these all overlap a little, as shown, the general effect is quite charming.

G. G.

THE GLORY OF THE SNOW.

AMONG those bulbous flowers of lowly stature which open early in the spring and remind us that winter, with its gloom and fog, will soon be a thing of the past, there is none that receives more universal admiration than the charming little Glory of the Snow. Its popular name, unlike many, is an expressive one, for frequently in its native haunts, and occasionally in this country, the dainty little bell-shaped, pale blue and white blossoms may be seen above a foil of driven snow, which enhances their beauty in no small degree. Boasting the rather long and sonorous botanical name of *Chionodoxa Luciliae*, this little plant has been known in our gardens for many years, yet it does not appear to be grown on an extensive scale, except in a few gardens where more or less rare plants are appreciated. It usually blossoms early in March, when the Snowdrops are waning, and is never so happy as when planted among deciduous shrubs, where it will multiply and in a few years form a veritable carpet of blue. There is a very large-flowered variety of it that appeals to many, and which is known as either *grandiflora* or *gigantea*. The blossoms of this are frequently $1\frac{1}{2}$ inches across, and somewhat paler in colour than those of the type. The most pleasing variety of all to me, however, is the beautiful little *sardensis*, the original bulbs of which, I believe, were found near the ruins of the ancient town of Sardis. The blossoms of this, though smaller than those of *Luciliae*, are of an intense gentian blue, and when massed together create a picture of rare beauty. In a narrow south border, which is all the space I can give them at present, the plants of this variety seed freely, and hosts of young plants are produced naturally from the seeds. There are several pink and white varieties of the Glory of the Snow, but these do not appeal to me in the least; they are washed-out imitations of the wild plant and are not nearly so pleasing. Fortunately, the *Chionodoxas* are not particular as to the soil in which they are planted, but they rarely give their best flowers the first year after planting.

H.

APPLE LANE'S PRINCE ALBERT.

It would be difficult to name a better all-round Apple for a small garden than this. It is one of the most regular croppers that we know, and, owing to its rather straggling habit, is best grown as a bush tree grafted or budded on Paradise stock, as shown in the accompanying illustration. The fruits attain a good size and are green, slightly striped with red, the green changing to a pleasing shade of yellow as they ripen. They are in season from November till March, and, though undoubtedly a culinary variety, are not at all bad for dessert in January and February. Lane's Prince Albert was first discovered growing in a garden at Berkhamsted, Herts, and was introduced to commerce by Messrs. Lane and Sons in 1857. Those who are thinking of planting Apples this autumn should certainly include this variety.

FRUIT NOTES FOR NOVEMBER.

Cordon Gooseberries.—In practically all small gardens there is a north wall or fence from which the amateur fails to secure a profitable return; he does not find many climbers that will thrive satisfactorily in such a position, and the consequence is that in the majority of instances the space is occupied by a plant that is neither really beautiful nor substantially useful. It is for such an aspect as this that cordon Gooseberries can be most strongly recommended, since it is certain that, given intelligent management, they will carry splendid crops of fruit later than can be ensured from the bushes growing in the open, and as they are from a previously unprofitable situation they should be specially welcome. Two year old plants ought to be procured from one of the reliable fruit nurserymen advertising in THE GARDEN, and

proportion of available food, of which the trees will have the advantage. It is far better, in my opinion, to dig above the roots, even though a few dozens may be broken, than to allow the weeds to remain and the surface to become so hard that it is impervious alike to air and water.

Planting Raspberries.—October is without doubt the ideal time for planting new Raspberry plantations, but it is comparatively seldom that it is possible, in the pressure of much work in that month, to accomplish the task, and it must, therefore, be done as soon afterwards as can be made convenient. It is impossible to cultivate the soil too deeply or thoroughly, and in its preparation, if a mixture of half-rotted leaves and manure in equal proportions can be provided, it will prove more advantageous than manure alone. Immediately after the canes are in position, the stems should be cut down to within 6 inches or 8 inches of the ground, with a view to allowing the plants to become perfectly established at the roots before



A BUSH TREE OF APPLE LANE'S PRINCE ALBERT. THIS IS AN EXCELLENT VARIETY FOR SMALL GARDENS.

planting should be done as quickly as possible. Prepare the soil by deep and thorough digging, incorporate some rotted manure in the second spit, and it will not be long before a return for the small outlay is being reaped. If the wall is of brick, the grower must be most particularly observant that the soil about the roots never becomes as dry as dust.

Digging Among Roots.—To suggest this will sound like heresy in the ears of many cultivators, who fear that to damage a single root on any of their Apple or Pear trees will mean instant death. But is this really so? Most assuredly it is not. Provided that proper care is taken and the blade of the spade or the tines of the fork are not driven in so deeply as to do serious injury to the root, nothing other than good will result from the practice. Not only are water and air encouraged to enter more freely, but the weeds that are almost sure to be present can be easily and efficiently buried, and in rotting down they will yield a

they are called upon to bear the strain of cropping; this precludes the possibility of any fruit in the first season, but it pays admirably in the long run.

Wall Trees.—It is steadily becoming more general to find a few trees on the walls of small gardens, for the simple reason that amateurs have learned that with a little care not only can the wall be attractively furnished with fruit trees, but that these will bear a welcome burden practically every season. At this juncture the grower must concern himself with the roots as well as with the pruning of the branches. As soon as this latter work is done, the soil above the roots should be loosened with a fork and have a good covering of manure. As it is quite probable that the soil at the foot of the wall will be dry, it is always wise to make certain on the point before manuring and to apply two or three soakings of clear water if necessary; and if the trees are on the old and weak side it will be beneficial to give heavy applications of liquid manure.

FRUIT-GROWER

IN A HAMPSHIRE GARDEN. SOME OF THE NEWER DECORATIVE ROSES.

(Continued from page 541.)

It is only a year or so ago that I remember writing to a friend "there are only two yellow decorative Roses worthy of the name, and they are Mme. Ravary and Souv. de Pierre Notting," and even these I had to qualify. The position is very different to-day, and we have now quite a lengthy list of Roses of a yellow shade that are really good yellow decorative sorts. Last week I dealt with four of them—Melody, Mme. C. Lutaud, Mrs. Ambrose Ricardo and Lady Hillingdon—all of them quite distinct, each with its own particular merit; and this week I will deal with four more, still keeping to the yellow shade of colour. Probably the most popular in future years will be

Queen Mary, sent out in 1913 by Messrs. A. Dickson and Sons of Newtownards. It is truly a "thing of beauty." I do not know of any Rose that I remember to have grown which has created more of what I must call a sensation, for want of a better word, in the eyes of those who were looking at it for the first time. There is something about its colour that is so charming that an exclamation springs to the lips, be they Rose enthusiasts or otherwise. To attempt to describe this charm on paper is an impossible task. Even those past-masters in the art, its raisers, fail, and where they do so, how can I hope to succeed. They call it bright canary yellow crayoned with pure deep carmine, and they go on to say that the colours do not commingle. A crayon is a pencil, and its markings are certainly distinct and do not mix like those laid on with a brush; but there is, as a rule, a hardness about a pencil mark that is missing from the colour scheme of Queen Mary, and so I must give it up, and content myself with saying truly and literally "indescribably beautiful."

Queen Mary belongs to the dwarf section of bedding Roses. The growth is medium rather than vigorous, yet it is shapely enough, and the term "medium" carries with it in this case no disparagement. It is, I know, frequently used by nurserymen when they wish to describe a Rose of bad growth, but there is nothing bad in this case. The Rose simply puts all its strength into its flowers, and it does not, therefore, make a big bush. It forms seed-pods very freely, and these must not be allowed to remain; but the flowers, if they are not cut as buds or half-opened blooms, should be cut as soon as they are past their best, to enable the plant to make that fresh growth which is essential if you are to have continuity of flower. The position is fairly summed up by a Professor friend of mine, whom I heard remark that he was not going to order any new Roses this year, but he *must* have

Queen Mary. As he planted several hundreds last year, there was some excuse for the first portion of his remark, and if there are any of your readers who are similarly situated, I hope they will follow his example and change their minds. We must all fill up vacant spaces in our gardens, and no hardy plants can touch a Rose plant for this purpose.

Southampton. HERBERT E. MOLYNEUX.

(To be continued.)

ROSES IN A GARDEN ON SURBITON HILL.

WHAT a host of happy memories the photograph of a garden of Roses on Surbiton Hill, on



ROSE GLOIRE DE DIJON AND CLEMATISES ON A PERGOLA.

page 495, October 10 issue, awakened in me!—for I grew up in an old-fashioned garden full of Roses there. Dear old garden! innocent of "colour schemes" or cunningly devised plan. "Specs it growed," like Topsy; indeed, I *know* it did, from a paddock, gradually turned into a garden, where flowers and fruit trees, Roses and vegetables were all mixed up together in a manner which would horrify modern gardeners. Antirrhinums jostled Jerusalem Artichokes. Such Antirrhinums! Not the poor, dumpy dwarfs nor the sickly, spindly spires one sees now, but great jolly bushes a yard in diameter. They lived year after year in that sunny, sheltered garden and yielded a wealth of blossom from

early summer till close on Christmas. There, too—long before bulbs were "naturalised" in grass—for childish fun and fancy I planted "fairy rings" of white Crocus round the boles of the trees on the lawns.

But I set out to tell of the Roses, which were the leading feature of that old garden. My mother was a Rose-lover, and very skilful in budding the standards, which were the fashion then. She got scions of new varieties every season for the row of Briars always in readiness to receive them. Among the then "new" Roses was Baroness Rothschild, soon discarded in disgust when found to be scentless. That is the first scentless Rose I can remember. The tennis lawn was bordered by beds of Roses, among which

Mint would insist on growing, though it sulked and died in the herb-bed. Particularly I call to mind two immense standards of Aimée Vibert, which in the summer looked like gigantic wedding bouquets and flowered again in the autumn till the end of the year, and a tall bush of Souvenir de Malmaison, with its beautiful buds, in the autumn. Bushes, too, there were of Scotch Briars with their wee white buds and dainty, though thorny, foliage. Beside them flourished a large Myrtle, whose flowers were in great request for summer weddings. When thunderstorms threatened, my mother would bid me "run and get the Roses before it rains," and I quickly cut hundreds, gathering them up in the front of my frock (we did not wear hobble skirts in those days). By the drawing-room window was a climbing Cabbage Rose, always in flower on Derby Day, and at the back of the house a pale pink, sweet-scented cluster Rose climbed to the first-floor windows. I never knew its name.

In the kitchen garden were two ancient Rose trees, literally *trees*. They were about ten feet high. One had blackish crimson blooms, with the scent of attar of roses. The other was more like Mme. Resal or Leonie Lamesch, a shell pink, loose-petalled Rose with smooth, shiny foliage (the children called it the "French Bonnet" Rose, as it was like the artificial Roses in our mothers' best bonnets), a type of Rose not well known nor esteemed then. In that old garden every

year I had a hedge of my dearly loved Sweet Peas, not then deprived of form and fragrance by Fashion. They grew only 4 feet to 5 feet high, and flowered from the ground upwards, a glorious mass of mingled rainbow hues, especially when the sun was setting behind the water towers.

At the Jubilee Ball at the Guildhall, London, in 1887, many folks were more finely arrayed than your Anne, but none wore lovelier Roses—a long garland a-down my green gown of some fifty creamy buds of Devoniensis, given me by old Mr. John Burrup of Surbiton Hill, who was the leading amateur Rose-grower there at that time. His garden in June was a floral feast.

ANNE AMATEUR.

PLANTS FOR DRY OR SANDY SOIL.

IN a great many gardens, and particularly those attached to modern residences, where owner and architect rightly insist on a gravel subsoil, the ground is by no means ideal for gardening, and unless care is exercised in selecting the plants, partial or total failure is likely to ensue. It is true that even the most sandy soil can, by good cultivation, which includes bounteous dressings with cow-manure, be rendered comparatively fertile, and, with the addition of stiff loam to the beds in the more prominent situations, these can be made good enough even for the clay-loving Roses. But such a revolution as the last-named process must, of necessity, be limited; it is exceedingly costly, and in the greater part of the garden the best must be made of the natural soil. Fortunately there are many plants which seem quite happy in sandy or gravelly situations, and these embrace those of annual duration, herbaceous perennials and shrubs, so that with judicious care the whole of the garden can be made beautiful and interesting.

Among annual flowers there are many to select from. Perhaps the best known of all is the common *Tropæolum* or so-called Nasturtium, a plant that is too often neglected, possibly because it is so easy to grow. It is ideal for sandy soil, where it will flower profusely and impart quite a tropical appearance to the garden. Sow it in rich soil and it will produce enormous leaves in abundance, but very few flowers. It can be had in separate colours, and is a good and useful plant for the poorest soil. An annual flower, and a beautiful one withal, that is seldom seen, but which will thrive in the hottest and driest position we can give it, is the Purslane (*Portulaca grandiflora*). If seeds are sown about the end of April, the seedlings soon form a dense carpet of fleshy green leaves, which are later thickly studded with brilliant-coloured flowers. *Eschscholtzias*, though strictly perennials, are usually grown as annuals. Their thick, fleshy roots penetrate deeply in search of moisture, and for that reason they are good for the soil that we now have under notice. There are a number of beautiful varieties to select from, including some with rose-coloured and others with brilliant orange flowers. The Snapdragon is another perennial that is usually grown as an annual and which will thrive well in poor soil, particularly where lime is present. The many beautiful shades to be found among the modern varieties are too well known to need further comment. Indian Pinks, Early Paris Wall-flower, Ten Week, Virginian and Night-scented Stocks, *Leptosiphon densiflorus hybridus*, Cornflowers, *Silenes*, Scarlet Flax and the Namaqualand Daisies are other annual flowers that we may successfully cultivate in our sandy soils. When we come to herbaceous perennials, there

is a wide list to select from, and in an article of this description it is impossible to do more than draw attention to a few of the best. The Sea Hollies or *Eryngiums*, Globe Thistles or *Echinops*, perennial Sunflowers, Golden Rod, *Gypsophila paniculata*, Pinks, *Stachys lanata*, Valerian, any of the Houseleeks, *Polygonums*, ordinary Wall-flowers, Alpine and Oriental Poppies, the red-flowered Milfoil and *Achillea Ptarmica* The Pearl, *Sedum spectabile*, *Gaillardias*, *Heucheras*, German Irises, *Linum narbonense*, perennial Lupines, *Lychnis chalcedonica*, *Malva moschata*, *Monarda didyma*, Catmint, *Polemonium cæruleum*, *Potentillas*, and *Rudbeckias* or Coneflowers are all good for the purpose.

Among shrubs, our choice of suitable kinds is more restricted, but there are a good many which can be successfully cultivated. Of these, the double-flowered Gorse must take a foremost position.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

BELLADONNA (ATROPA BELLADONNA, L.).

(Continued from page 549.)

Prices.—Only a little Belladonna root is dug in England, the large supplies used being derived from the Continent. The Balkan War of 1912-13 interfered with the continuity of Belladonna exports from Croatia and Slavonia in South Hungary, the chief centres for foreign Belladonna. Stocks of roots and leaves made shorter supplies eke out until 1914, when prices rose owing to increasing scarcity. Root which realised 45s. per cwt. in



A COLONY OF SUN ROSES OR HELIANTHEMUMS. THESE ARE EXCELLENT FOR DRY, SANDY SOILS.

Once established, it seems to defy even the most tropical weather, and the poorer the soil the better it appears to flower. Then there is a wide range among the *Cytisus* or Broom family, some of which are the most beautiful of our hardy flowering shrubs: *Cytisus scoparius andreanus*, *C. sulphurea* and *C. præcox* are three of the best, though there are many others; *Berberises vulgaris*, *Aquifolium*, *stenophylla* and *Darwinii* may also be planted with a good prospect of success; *Cistuses*, *Helianthemums* or Sun Roses, *Tamarisks*, *Olearias*, *Hypericums*, *Genistas*, *Guelder Roses*, *Mock Oranges*, *Dogwoods*, *Hollies*, *Forsythias*, *Yews*, *Aucubas*, *Cotoneasters*, the ornamental *Brambles* and *Lilacs*. Of trees, the following may be expected to do well in poor, sandy soil: *Robinias*, *Limes*, *Chestnuts*, *Sycamores*, *Cratægus*, *Judas Tree*, *Pinus sylvestris* and *Evergreen Oaks*.

January, 1914, sold for 65s. in June, and on the outbreak of war the price immediately rose to 100s. per cwt., and before the end of August 150s. had been paid. Belladonna leaves from abroad sell at normal times for 45s. to 50s. per cwt., but at the end of August they were unobtainable at 1s. per lb.

Manuring.—Authorities differ on the question of manuring. English growers manure little if plants are strong. One authority found that fertilisers tend to lower activity as judged by alkaloidal content. With soil suited to the plant, the effect of artificial manures on growth is often small; but if the soil is not already rich, the crop may be increased severalfold by the use of farmyard manure or a mixture of nitrate of soda, basic slag and kainit.

In other experiments artificial fertilisers did not materially alter the proportion of alkaloids

in the green leaf, but in several cases the crop was largely increased in weight. Unfortunately, the results were partly vitiated by the death of a large proportion of plants in the third year, for some reason not definitely ascertained. A French authority states that by using farmyard manure the amount of alkaloids in dried leaves of Belladonna grown at Houdan, France, was doubled, but this only raised the alkaloidal content to the standard of English leaf. From experimental plots an Austrian investigator concluded that manuring increases the yield of the crop by weight. The results of these researches seem to support the custom of Belladonna-growers to manure if the soil is poor or the plants are weak.

Activity.—There appears to be no marked variation in the amount of alkaloids in Belladonna leaf and stem between June and September, hence the time of collection is not important,

probably pay well to grow Chamomile next year, though the labour entailed in collecting English-grown Chamomile is more than the price usually obtained for the Belgian drug. English Chamomile is worth about 3s. per lb., the very finest selling at still higher prices.

Cultivation.—Chamomile prefers a dry, sandy loam, but stiffish black loam gives the best crop of flowers. The usual method of propagation is from "sets," each old plant being divided in March into ten or twelve portions, which are planted in rows 2½ feet apart, with a distance of 18 inches between the plants in the row. Chamomile may also be grown from seed, but some of the resulting plants will produce the less desirable single flowers. Weeding is done by hand.

The flowers are picked in September, or earlier if the season is dry. Collecting is done by women and children, payment being made by the pound

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Sophro-Lælia Felicia Fowler's variety.—

A small plant with a one-flowered scape of this remarkable novelty was shown, the flower being of fine proportions and great solidity. The colour is well-nigh unique, and may best be described as rich ruby crimson, the shade pervading the whole of the flower. From J. Gurney Fowler, Esq., Tunbridge Wells.

AWARDS OF MERIT.

Odontoglossum Irene (O. thompsoniana × O. Uro-Skinneri).—A plant having a well-flowered raceme of this well-marked form was shown. The body colour of the flower is glowing maroon irregularly intersected and veined white, a slight yellow crest acting as a signal spot. Shown by Messrs. Charlesworth and Co., Hayward's Heath.

Cattleya Neleus var. Sunspot (C.

Iris × C. Ophir).—The rich golden yellow of the widely winged sepals and petals and purplish crimson lip of this handsome variety, while affording a fine contrast, are enhanced in decorative value by the imposing character of the variety. The plant bore a three-flowered scape. Exhibited by Mr. F. Menteith Ogilvie, Oxford.

Cypripedium Nivana (C. Harefield Hall × C. nitens).—There is much, both in the imposing character of the variety as a whole and the handsome dorsal sepal in particular, to suggest the influence of the first-named parent. The pouch is of bronzy yellow hue. A vigorous grower. Exhibited by Messrs. Charlesworth and Co., Hayward's Heath.

Cattleya Astron.—An award of merit for this variety was confirmed. We were unable to locate the plant. From Baron Bruno Schröder, Englefield Green.

Polystichum angulare divisilobum plumosum densum superbum.—It is unfortunate that a gloriously beautiful or handsome plant should have such a millstone about its neck as the above. In some

measure the names are descriptive, hence it would be superfluous if we enlarged upon them (see illustration). From Mr. Amos Perry, Enfield.

Lapageria alba delicata.—This would appear to be a seedling variety between the rose and the white coloured sorts, the pale flesh pink colouring being beautiful in the extreme. Shown by Elizabeth Lady Lawrence, Burford, near Dorking.

Chrysanthemum Mrs. J. Gibson.—A large exhibition Japanese variety having drooping petals coloured pink and freckled with white.

Chrysanthemum Captain Fox.—A large exhibition Japanese variety of the reflexed type. The colour is maroon crimson with pale golden reverse.

Chrysanthemum La Negresse.—A decorative reflexed variety of rich crimson tone. The flower-heads are well supported on short, sturdy peduncles. These three varieties were shown by Messrs. W. Wells, Limited, Merstham, Redhill, Surrey.

The whole of the above-mentioned novelties were shown before the Royal Horticultural Society on the 3rd inst., when the awards were made.



A BEAUTIFUL NEW VARIETY OF THE BRITISH FERN POLYSTICHUM ANGULARE. (See text.)

and the leaves may be gathered any time before the annual portions of the plant begin to fade.

In the English root seasonal variation in alkaloidal content is said to be very small. Atmospheric conditions appear to have a marked influence, the highest percentage of alkaloid being yielded in plants grown in sunny and dry seasons.

CHAMOMILE (ANTHEMIS NOBILIS, L.).

Prospects.—The demand for Chamomile flowers, though slowly decreasing, is a steady and considerable one. Belgium is the chief grower, and on the outbreak of war the price rose from 55s. to 80s. per cwt. for fair average quality. By the end of August 120s. was asked for last year's Belgian flowers, best quality being 140s. per cwt. The new Belgian crop due in September can hardly have been fully collected, so that a demand will exist for English Chamomile, which is normally practically all used for distillation of oil. It will

(up to 1½d.). Rapid drying is necessary if the flowers are to retain their purity of colour, the flowers being laid on canvas trays in a heated drying closet. From 5lb. to 6lb. of fresh flowers yield 1lb. of dry flowers; the yield of dry flowers is about 4cwt. per acre. They are sorted and graded according to colour. A fairly good product would probably be secured if the flowers were picked as they came in bright weather, which is the best time for drying, this being done in the open or in well-ventilated sheds in as thin layers as possible.

(To be continued.)

PLANTING BULBS.

WE would urge all our readers who are contemplating the planting of bulbs to get the work done as soon as possible. Although many kinds can be successfully planted later, there is no doubt that the best results are obtained from those consigned to the earth earlier. Better bulbs are also obtainable now than in a few weeks' time.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Ripe Grapes.—Vineries in which ripe Grapes are hanging should be kept at a very even temperature and the atmosphere quite dry; 45° is quite high enough. As soon as the foliage drops, the bunches may be cut and placed in the Grape-room, where they will keep quite as well as if left on the Vines. Very careful attention will be necessary through the winter in order to keep the berries from damping, and as soon as one decaying berry is noticed, it must be removed. Careful ventilation is of the greatest importance, especially in damp, dull weather.

Plants Under Glass.

Ferns.—During dull winter weather these plants should be frequently overhauled and all decaying fronds removed. Give as much space as possible between the plants in order to harden and prepare them for house decoration in the winter. A close, humid atmosphere must be avoided. A little soot-water may be applied in order to give colour to the fronds and rid the pots of worms.

Crotons.—Examine these plants carefully, and if mealy bug is present, some approved insecticide should be applied to destroy it. All broad-leaved varieties may be carefully sponged, but the narrow and curly leaved varieties ought to be cleaned by spraying, as it is difficult to use the sponge effectually without injury to the foliage. These should afterwards be syringed with clear soft water, the plants being carefully placed on their sides while this is being done. Crotons will benefit by full exposure to the light throughout the winter months.

The Forcing-House.—Where cut flowers are in demand at Christmas, preparations should be made at once by placing a good number of plants in gentle heat now and allowing them to develop gradually. Narcissi in variety are among the most useful; but these require to be brought along very carefully and without strong heat, or many of them may fail to flower. Early Tulips should also be brought on very steadily and in subdued light. Water freely as soon as the pots are well filled with roots. Lilacs are always welcome, and are easily forced providing they are not subjected to very strong heat at first. These may be potted at once and placed in heat as it becomes necessary to meet the demand for cut flowers.

The Flower Garden.

Spring Bedding.—This should be finished with as little delay as possible, so that the plants may have time to make fresh roots before sharp frost sets in. Beds which were planted early will benefit by hoeing. Keep them quite free from decayed leaves, let the edgings be trimmed, and keep the surrounding grass swept so that the place may present a clean and tidy appearance.

Plants in Pits.—Hollyhocks, Pentstemons and various plants in pits or frames which are intended for spring planting should be freely ventilated during mild weather. As soon as they are established in the pits, the lights may be removed on every favourable occasion. Pinch the tops of the most forward plants in order to keep them stocky.

Humea elegans.—These plants are quite safe in a cold pit until frost sets in, when they ought to be removed to some structure where frost can be excluded. Water with great care during the winter months. Under cool treatment very little water will be necessary, but it should be remembered that if once allowed to become too dry at the roots, serious injury will be the result.

The Rock Garden.—It often happens that the roots of some of the stronger-growing subjects penetrate the space allotted to more tender, shy-rooting plants. In such cases it is necessary to remove such roots as far as possible, and replace the soil which has become exhausted with new material. While this work is being done, the special proclivities of the various plants for certain kinds of compost ought to be considered, and

separate mixtures, each containing its special item, made up and applied as it becomes necessary.

The Hardy Fruit Garden.

Morello Cherries.—The pruning of these trees should be taken in hand at once. Let the young wood be judiciously thinned and trained in the same manner as a Peach tree, allowing at least 4 inches between the young fruiting branches. In order to keep the trees well furnished with fruiting wood, a number of the old branches must be removed each year, and this is best accomplished before the trees are removed from the wall. When pruning is finished, the trees should be carefully cleansed with some approved insecticide. These trees are generally grown on a north wall; consequently the training should be accomplished while mild weather lasts.

The Kitchen Garden.

Globe Artichokes.—Before sharp frost sets in, some protection should be placed round the stems of these plants, taking care to leave the crowns open, or damping may set in. The ground between the rows may then be forked up and made to look tidy for the winter.

Asparagus-Beds should be divested of all withered stems, and the surface lightly pricked up in order to remove all young weeds and prepare the beds for a top-dressing of decayed farmyard manure. The alleys ought to be deeply dug, and a quantity of rough manure dug in to enrich the soil for top-dressing in the spring.

Winter Salad.—Lettuces in the open garden which are in an advanced condition should have some protection applied on the approach of frost; or they may be carefully lifted and placed in cold pits, after which a good watering should be given. Batavian Endive may be treated in the same way.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Endive.—To maintain a supply of this fine salad, a few more plants ought to be lifted and planted in a convenient place for blanching. Plants lifted from now onwards should have a good ball of earth attached to the roots, and the work must be carried out as expeditiously as possible.

Rhubarb.—Like all vegetables intended to produce early supplies, the forcing of Rhubarb must be gone into seriously. For Christmas supplies the roots should now be got under cover; that is if they have been exposed as previously advised. At this stage guard against excessive heat, and see that the roots do not receive a check by watering with water many degrees below the growing temperature.

Celery.—Owing to the unusually fine weather experienced in October, Celery continued to grow much later in the season than usual, and the final earthing up was delayed in consequence. As, however, dampness has to be guarded against, no time should be lost in placing the soil up to the stems to the fullest extent.

Peas.—To have an early supply of Peas—that is, during the spring months—a sowing should be made now either in narrow boxes or pots, the latter for preference. There are now to be had from our leading seedsmen some dwarf varieties suitable for this work. Sow in 8-inch pots in a compost of good loam with a little spent Mushroom-bed manure, and stand these in a cold frame until growth commences. Guard against slugs and mice, which do an immense amount of harm just as the young shoots are coming through. The plants must on no account be coddled at any stage of their growth, nor should any attempt be made to force them.

The Flower Garden.

Violets in Frames.—During the dull, sunless days of November these Violets will need looking over frequently, and all the decayed leaves and faded flowers removed. Stir up the soil between the plants with a hand fork. To guard against

slugs, a dusting of soot or lime should be applied between the plants occasionally.

Chrysanthemums.—A number of plants of the border varieties must now be lifted and planted in cold frames to provide cuttings for next year's supplies. It is quite true that Chrysanthemums will stand a good deal of frost, but in cold and wet districts a great many are sure to die out in the winter. Although under the protection of cold frames, the lights should be fully opened during all but very severe weather.

Michaelmas Daisies.—Where these require replanting, the work may be proceeded with now. To keep the stronger-growing varieties within bounds, they need to be replanted every two years. When grown on a border entirely devoted to them, opportunity should be taken to have the ground deeply trenched, adding a liberal supply of good, well-rotted manure as the work proceeds.

Plants Under Glass.

Border Carnations in Baskets.—The system of growing border Carnations in wire baskets for suspending from verandahs and summer-houses is not so generally adopted as it might be, considering its effectiveness. Plants that have not been layered should be used in making up the baskets, and if slightly shaded for a short time will survive the severest weather. We had some plants this season that were 4 feet through, and the flower-stems hung gracefully down about three feet all round. The present is a suitable time to do this work.

Malmaison Carnations.—The earliest potted layers ought now to have almost filled the small pots with roots, and may be potted into 5-inch or 6-inch pots. Later plants can remain in the small pots until January. The soil for this potting should be good loam, a small quantity of leaf-mould, with a little ground charcoal and soot. One watering a few days after potting will probably suffice for some weeks.

Plumbago rosea.—The earliest plants will now be developing their flowers, and may be moved in batches into the flowering house. Each plant should be allowed plenty of space to develop the small side shoots, which will throw some useful flowers after the main stems have finished.

Primula kewensis.—This free-flowering Primula ought now to be coming into bloom, and, in order to draw out the flowers, may be given a little more fire-heat. If kept in too low a temperature, the foliage is inclined to damp badly. Very little artificial manure should be given; a small quantity of liquid manure occasionally will be ample.

The Hardy Fruit Garden.

Apricots.—Owing to these being the earliest fruit trees to come into flower, no time ought to be lost in seeing to any that require to be moved. In transplanting Apricots it is most important that the roots be kept near the surface and the soil made very firm about them. In addition to lime rubble, some gritty matter must be added to the soil. Carefully remove all worn-out branches, and any long spurs may be shortened.

Raspberries.—In making new plantations of these it is wise to select a spot where the soil is fairly moist, and, if possible, in a different aspect from the existing plantation, the reason being that a better succession of fruit can be had. Although a surface-rooting plant, the ground should be deeply dug to prevent the soil becoming stagnant, adding at the same time a liberal allowance of lime rubble. The plants are best planted in rows about five feet apart and 18 inches between the plants.

Fruit Under Glass.

Figs.—Pot trees intended to produce ripe fruit towards the end of April ought now to be placed in a vinery or Peach-house shortly to be started, failing, of course, a pit that could be devoted entirely to them. In the latter a hot-bed could be made up in which to plunge the pots. No attempt should be made to hasten the trees into growth; the starting must be slow and gradual. Damping and syringing must be performed with caution.

JOHN HIGHTATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

PRUNING ORNAMENTAL SHRUBS.

It is doubtful whether any other necessary gardening operation is so little understood, or so seldom properly carried out, as the pruning of ornamental shrubs. In many places, and more particularly gardens of small dimensions, the cutting is carried out indiscriminately and to excess, with the result that the plants never attain the graceful contour and freedom of blossoming that Nature intended. On the other hand, one sometimes finds, even in good gardens where a large staff is kept, shrubberies that are overcrowded and neglected, and far from being the interesting and pleasing feature that a well planted and tended shrub border ought to be.

For the purpose of elucidation we may divide ornamental shrubs, roughly, into three sets, *i.e.*, those that flower in late winter and spring, those that flower in summer and autumn, and those of an evergreen character. The first two sets are of the greatest importance, and, owing to the divergent character of the many kinds embraced, need the exercise of forethought and care.

Shrubs that Flower in Late Winter and Spring.—Of these we find good examples in the Winter Jasmine, Forsythia suspensa or Golden Bell, Spiræa arguta, S. Thunbergii and S. confusa, Winter Sweet (Chimonanthus fragrans), Prunus japonica flore pleno and the Star-flowered Magnolia, M. stellata. Now, it is obvious that as these shrubs produce their blossoms so early in the year, they must be borne on wood that was made the previous autumn; hence to cut away any of this wood before the flowering, *i.e.*, in autumn or winter, would mean a corresponding loss of flowers. For this reason the wise gardener will defer any cutting that may be necessary until after the flowers have faded, but the earlier then it is done the better; for this removal of wood is an inducement to the shrub to produce more growths of a robust character that will, in most instances, flower freely next winter or spring. Although this may be taken as a good general basis on which to work, some knowledge of the shrubs and the conditions under which they are grown will also be necessary. Some shrubs, notably Magnolia stellata, already referred to, are so slow-growing that very little pruning is ever needed, all that is required being an occasional thinning out of old wood. On the other hand, the Golden Bell (Forsythia) or Prunus triloba flore pleno will need their shoots that have flowered cut back close to the old wood if grown in beds or against a wall, but if grown in a border, where large specimens can be accommodated, only a few growths need be treated in this way. Much the same remarks apply to the Winter Jasmine when, on the one hand, it is grown in a confined space and, on the other, where it has almost unlimited room. It will therefore be seen that the pruning of early flowering shrubs calls for the exercise of common sense and knowledge of the habit of the plants and the purpose for which they are grown.

Summer and Autumn Flowering Shrubs.—When we come to these, the remarks as to the exercise of common sense may be applied with equal force. But here the method of pruning will differ considerably. Into this section we may place such shrubs as Buddleia variabilis veitchiana, Tamarix æstivalis, such Spiræas as japonica and Douglasii, Ceanothuses azureus and americanus, Diervillas or Weigelas, and the Spanish and Mount

Etna Brooms. With these shrubs the pruning is usually done in February or March, especially with the Buddleia and Spiræas, which are then cut hard back almost to the old wood. These shrubs produce their best flowers on growths that are made during the current year, and, by pruning severely, the formation of sturdy shoots is induced. Then someone may ask, "Why not prune earlier in the winter?" The reason is this: If the work were done, say, in November or December, the dormant buds that were left would, in all probability, start into growth almost at once, and, consequently, be very liable to damage by cold winds or frost. By leaving the pruning until March, the buds remain quiescent and the danger is to a very considerable extent obviated. The Tamarix mentioned may be pruned in two ways. At Kew it is grown in large lawn beds, and is cut down nearly to the ground level early each spring. On the other hand, if grown in a shrub border and a large plant is desired, less drastic treatment would be called for, a partial shortening back only of the growths being necessary. The Diervillas or Weigelas need different treatment again. Although flowering in summer, the blossoms are mostly on the previous year's wood, and a thinning out of very old growths is all that can be permitted, unless some are shortened to keep them within bounds. The Spanish and Mount Etna Brooms are best left well alone, except to occasionally thin out a few of the old shoots, or to restrict those that are encroaching too much on their neighbours. In doing this, however, do not cut into old wood, otherwise new shoots are not likely to be formed. The Ceanothuses named are cut back almost to the old wood each year, but this must not be taken to apply to such kinds as C. rigidus, C. thyrsiflorus and C. veitchianus, which flower much earlier in the year, and ought, therefore, to be treated as advised for Forsythia. Most of the ornamental flowering shrubs come under one or the other of the types that are named, and, with reasonable care and observation, their pruning ought not to be a matter of great difficulty.

With Evergreen Shrubs the work is of a comparatively simple character. It is usually done for the purpose of admitting light and air to the plants, when a general thinning out of the oldest and worst-looking shoots is called for; or to keep the plants within bounds. In the latter case shortening back of too venturesome growths is demanded, and let it be done with knife or secateurs, not with the garden shears, especially where large-leaved shrubs are being dealt with. Although evergreen shrubs can be pruned at almost any season, March is most generally favoured, because new growth is subsequently very quickly formed, and any branches that may have been laid bare veiled with greenery. H.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

HELICHRYSUM TO NAME (A. B.).—From the piece submitted your plant would appear to be Helichrysum microphyllum, but it would be unsafe to name it unless seen in flower. When that ensues, send us a flower-head and branch for verification. During the winter you had better give the plant frame or cold greenhouse protection.

HARDY PLANTS FOR EXHIBITION (W. P.).—For the first week in September we recommend the following for distinctness and variety. You will note we have given you more than you require, since it is not always well to trust to the exact numbers. Helenium Riverton Gem, H. cupreum, Sedum spectabile atropurpureum, Lobelia Queen Victoria, Aster Amellus Riverslea, A. lævigatus, A. Beauty of Colwall, Statice latifolia, Veronica subsessilis, Anemone japonica alba, A. j. rubra and A. j. Queen Charlotte. If of each of these you plant three specimens to form a group, you should have no difficulty in making a good choice.

TREATMENT OF IRIS STYLOSA (G. Sim.).—This Algerian species requires a well-drained soil of sandy loam to which old mortar or ceiling plaster at the rate of one-third of the whole has been added. Failing these, the next best thing is sandstone broken to the size of a small Orange and in the same proportion. Important cultural items are very firm planting and keeping the rhizomes quite near the surface. The soil firmness tends to moderate grossness of growth and favours a better flowering. A south aspect against a wall should be chosen, and a greenhouse wall for preference. If the soil is of a clayey nature and poorly drained, arrange the plants a few inches above the ordinary level and wedge them about with sandstone blocks. In your district the species, though usually regarded as winter flowering, will not, in all probability, do much in the way of blooming before early spring.

PERENNIALS FOR SHADY GARDEN (G. A. C.).—Doubtless the Apple trees casting so much shade is among the causes of your non-success. This will continue unless the shade can be modified by pruning the trees. You would get the best flowering from such plants as Coreopsis grandiflora, Gaillardia grandiflora, Oriental Poppies in scarlet and other shades, Irises of the Flag section, as aurea, Mrs. Darwin, Dr. Bernice and Mme. Chereau; Pyrethrums J. N. Twerdy, Enchantress, Ne Plus Ultra, James Kelway, Hamlet and Mrs. Bateman Brown; Helenium pumilum, Achillea Ptarmica The Pearl, A. alpina, Campanula Van Houttei, Rudbeckia Newmanii, Anemone japonica rubra, A. alba, A. elegans, Aster Amellus bessarabicus, A. A. Riverslea, A. Sirius, A. lævigatus, A. Novi-Belgii densus, A. ericoides Desire and A. acris. To these might be added Carnations of sorts, hybrid Pentstemons, early flowering Chrysanthemums, and a selection of Daffodils and Darwin Tulips for early flowering. All these had better be obtained in plants and put out during the coming weeks. All flowering climbers prefer sun, and we do not recall any likely to give much success in a "very shady part of the garden." A Rambler Rose may do for a time, and Lady Gay is one of the best. For the greenhouse you had better grow Zonal Pelargoniums, to be had in cuttings or plants now; Perpetual-flowering Carnations, also available now as plants; Heliotropes and Fuchsias, obtainable in the spring as rooted plants; Lillium longiflorum and L. speciosum, available now as dry bulbs; tuberous Begonias in variety, obtainable in February as dry roots; and Primulas and Cinerarias, the seeds of which may be sown in February and March. From cuttings obtained in February next, Chrysanthemums for flowering a year hence may be grown.

GREEN CARPETING PLANTS (Japan).—Just what is likely to succeed and do what you require is very much a question of experiment, and not a little also of cultivation. In a land where "lawn grass is hard to grow" it is obvious that special cultural methods must be resorted to if success is to be attained. In the circumstance we are not surprised to learn that "Pansies were dried up in July," and a much more enduring, more carpeting member of the race like Viola cornuta atropurpurea would, in all probability, do much better. Viola Andwell Gem is another fine carpeting subject, and both are hardy, enduring and freely flowered in England. To ensure

success, however, these should be planted in the autumn—in this country October and November are the best months—and in deeply trenched, heavily manured soil. By these means, and by the free use of cow-manure, valuable rather for its cooling and moisture-retaining attributes than for high manurial properties, these plants are rendered attractive often enough in the poorest and sandiest of soils. Then there is the entire range of the *Aubrietias*, not a few of which luxuriate on old walls and ruins, where little soil and great dryness prevail. There are many varieties, and all are spring flowering. These could be raised from seeds. **Campanula muralis* (portenschlagiana) produces a most refreshing carpet of green, and for a long time is shrouded with pale blue flowers. In similar circumstances to the *Violas* some of the Mossy Saxifrages should be tried, **S. hypnoides*, *S. caespitosa*, *S. geranioides*, *S. Sternbergii* and *S. muscoides* being among the more useful. Other good plants of a carpeting nature are **Silene alpestris*, **Achillea tomentosa*, *A. Wilczekii*, *Herniaria glabra*, *Helxine Solierolii*, *Acena sanguisorbae*, *Veronica prostrata*, **Sedum album* and *S. acre*. A plant of exceptional merit in such cases, though some object to it or account of its Chamomile-like flower-heads, is **Pyrethrum Tchihatchewii*. It will often succeed where grass refuses to grow. These are of prostrate habit, and in the main ornamental in flower also. To ensure success, the value of deep cultivation should be appreciated, as this will assist to reduce watering to a minimum. We have marked by an asterisk those we consider the best in the circumstances named.

TREES AND SHRUBS.

PRUNING TAMARISK (M. E. B.).—You had better leave your Tamarisk until February before you cut it back if it is one of the summer-flowering kinds. If, however, it is *Tamarix tetrandra*, which blooms in May, pruning must be left until the flowers are over. At your altitude the climate may be too cold for the best development, but that you can only find out by experiment. The Willows you mention should be cut hard back in March, just as new growth is commencing.

WHEN TO PRUNE POLYGONUM BALDSCHUANICUM (E. Wolff).—*Polygonum baldschuanicum* may be pruned any time during the winter, but for preference about February. It may be cut back fairly hard if you so desire, for abundance of shoots will be produced next summer from buds on the lower parts of the branches which would otherwise have remained dormant. If you do not wish to prune the plant severely, cut back the wood formed this year to within an eye or two of the base.

PRUNING HIBISCUS (W. H. C.).—Your plants of *Hibiscus syriacus* can be cut back as you desire, but it will be advisable to delay the work until February. The plants may be pruned fairly severely at that time. If you so wish, they can be cut back to within a short distance of the base of the main branches. When the work is done, cover each wound with coal tar, otherwise fungus spores may find an entrance and cause the branches to decay. We shall probably publish a note on the cultivation of this shrub at an early date.

SHRUBS FOR SEASIDE (Plymouth).—The following shrubs are likely to suit your purpose: *Olearia Haastii*, a New Zealand shrub of dense habit, growing 4 feet high and as much across. Leaves evergreen, flowers white, in July. Stands pruning well, and is one of the very best seaside shrubs. *Veronica speciosa*, evergreen, grows 3 feet to 4 feet high and 4 feet to 5 feet through; flowers freely during the autumn and early winter. Likes sea air. *Fuchsia Riccartonii*, usually deciduous, grows 6 feet to 10 feet high and as far through; flowers throughout the summer and stands sea air well. *Arbutus Unedo*, evergreen, 10 feet to 15 feet high and as much in diameter; flowers in the autumn and bears decorative fruit; should be sheltered a little from strong breezes. *Laurustinus*, evergreen, 4 feet to 8 feet high and as far through, will give good results in the position described. *Philadelphus Lemoinei erectus*, a dwarf Mock Orange, 3 feet to 4 feet high, which is likely to give better results than the taller ones. The Lilac is not likely to give very good results in such an exposed place, though it may be tried. Sea Buckthorn (*Hippophaë rhamnoides*), a showy fruiting shrub which thrives well in the vicinity of the sea. Male and female plants must be planted together. Mature plants may be kept to 6 feet or 8 feet high and the same in diameter by pruning. *Berberis Darwinii* is an evergreen which bears orange-coloured flowers in April. It grows from 6 feet to 10 feet high and from 4 feet to 6 feet in diameter. *B. stenophylla* is also an orange-flowered evergreen. Of spreading habit, it grows 8 feet high and as far through. *Tamarix pentandra*, 3 feet high and 2 feet through. It must be cut back in February each year. *Escallonia macrantha*, an evergreen, grows 6 feet to 8 feet high, with a similar diameter. Its red flowers appear in the summer and autumn. *E. exoniensis* is quite as vigorous. It bears white flowers. *E. philippiana* grows about three feet high and the same through. The leaves fall in the autumn and the flowers are white. *Cytisus scoparius andreaeanus* and *C. præcox* are showy Brooms which bloom in May. By cutting them back each year after flowering they form bushy plants 3 feet to 4 feet high. *Ribes sanguineum*, a deciduous early flowering shrub, grows 4 feet to 5 feet high and the same across. *Cistus laurifolius* is a white-flowered evergreen 2 feet to 5 feet high of loose habit. *Hypericum moserianum* is a yellow-flowered tufted plant a foot high. *Erica mediterranea* is of compact growth, 4 feet to 6 feet high and 2 feet to 3 feet through. *Diervilla Abel Carrière* grows 5 feet to 6 feet high and forms a large bush. The

foregoing particulars will give you an idea as to the amount of space required for fully grown plants. The following twelve perennials may be grown: *Papaver orientale*, *Salvia nemorosa*, *Monarda didyma*, *Gypsophila paniculata*, *Delphiniums* in variety, *Phloxes* in variety, *Helianthus* Miss Mellish, *Aster* (Michaelmas Daisy) Climax, *Lychnis chalcedonica*, *Lilium candidum*, *Crambe orientale* and *Heuchera sanguinea*.

CLEMATIS JACKMANNII ON WALL (V. A.).—*Clematis Jackmannii* would succeed in the position named, but it is apt to become very bare at the base. Should you desire to keep the wall well clothed, it would be better to select a plant like *Jasminum nudiflorum*. This plant bears yellow flowers freely during the winter. A free-flowering red Rose will be found in Longworth Rambler. It is a Hybrid Tea, producing its flowers over a long period. Two good Apples to plant as cordons are Cox's Orange Pippin and Charles Ross. The fruit of both kinds will keep until Christmas. The Everlasting Pea can be planted in the position described.

RUSCUS ACULEATUS NOT FRUITING (E. H. K.).—*Ruscus aculeatus* does produce fruits in this country, but as male and female flowers are produced on different plants, it is necessary to plant both sexes together to procure fruits. Propagation is frequently done by division of the clumps; hence it often happens that the plants in certain places are all of one sex, and presumably all your plants are either male or female. If you raise plants from seeds, you are almost sure to procure both sexes. When your old plants flower the next time, take notice whether they are males or females, and procure examples of the opposite sex.

THE GREENHOUSE.

TREATMENT OF RHODODENDRON CUTTING (P. J. T. H.).—Your *Rhododendron* cutting, having now pushed forth numerous fine roots, should be potted in some good peat and sand such as is used for Azaleas, Heaths and similar plants. It is very necessary that the pot be effectually drained. As the roots produced in water are very brittle, particular care must be taken not to damage them when potting. After the plant is potted, a thorough watering should be given through a fine rose, after which it must be returned to the structure in which it has rooted. We do not know the temperature of your hothouse, but when the roots have taken possession of the new soil it must not be kept too warm, as a temperature of 50° to 60° during the winter will be very suitable for it. At the same time, we must congratulate you on striking a *Rhododendron* in this manner, for we have never before met with cuttings of these plants rooted in water alone.

LILY BLOOM FOR INSPECTION (Sister Anne).—The Lily is *Crinum Moorei*, and, when well grown, one of the most ornamental of its class. To do justice it should have greenhouse treatment and a rather liberal fare. It is best grown in rich sandy loam and leaf-mould to which well-decomposed manure has been added. If this latter is not available, a little bone-meal or artificial fertiliser, such as Clay's Fertilizer, at the rate of two small handfuls to half a bushel of soil. In the growing season a dessert-spoonful of the manure sprinkled on the surface soil once a fortnight and watered in would be helpful. At this period, too, the plant should have abundant supplies of water. This is most important. If you have any difficulty in obtaining the soil, any local nurseryman would supply it. The plant is almost evergreen, but well repays a few weeks' rest, and little water is required during the winter months. If you wish to repot it, do so in March next, and use a pot of rather liberal size. Some of the finest examples we have seen were grown in the conservatory, the huge pots immersed half their depth in the water of the fountain basin, the plants revelling in the treatment and flowering grandly.

ROCK GARDEN.

MAZUS REPTANS (E. S. L.).—So far as we can judge from the description given, your plant is the correct one, the question of leaf colour—invariably influenced by soil and other local conditions—notwithstanding. The species, naturally of a carpeting and free habit of growth, would in your district put on a greater vigour, and with good soil might be responsible for the "terrific growth" of which you speak. It is not a plant we should select for the moraine in the ordinary way, as it is much too rampant. Experiences in different localities, however, are so varied that a plant which is rampant in one place may require a good deal of coaxing in another before it can be induced to grow at all. Try firming the soil, both in the tufts and around. This might steady growth and give you an ample reward in flowers another year. Excess of growth is opposed to a good flowering, and a modification of it might bring about the desired result.

ROSE GARDEN.

ROSES DISEASED (Hollyhock).—The Rose Juliet is attacked by the fungus *Actinonema rosæ*, which is often very serious in its attacks upon that variety. Persistent spraying with Bordeaux mixture from May onwards will check it to some extent. Juliet does well in an open position, but flowers on the old wood, and is, therefore, a fit subject for pegging down. Baroness Rothschild is attacked by the Rose rust (*Phragmidium subcorticatum*). All leaves attacked should be collected and burned in the autumn, and spraying with a rose red solution of potassium permanganate will check this disease to some extent. The Hollyhocks are also suffering

from rust, due to the fungus *Puccinia malvacearum*. Raise seedlings and spray them with a rose red solution of potassium permanganate at frequent intervals. *Puccinia ægra*, another rust, is attacking your *Violas*. Cut them down and spray with the permanganate solution mentioned above.

MANURE FOR ROSE (T. H.).—You would probably find cow-manure give you better results than horse-manure for the Rose, and the addition to this of basic slag would undoubtedly be beneficial. You do not say whether your meadow land is light or heavy, so that we cannot advise what artificial manure would be best. We think, if you used a good dressing of basic slag last year, you need not add lime this year, but probably some form of nitrogenous manure will prove of service. Sulphate of ammonia would perhaps be the best for grass land, or steamed bone-flour where the herbage is very poor.

FRUIT GARDEN.

NEW PEACH BORDER (E. L. K.).—You do not say whether the old Peach border is occupied with the roots of the trees still growing in the Peach-house, or whether you are about to plant a new tree or trees in a new border. We presume it is the latter. The following makes an excellent soil compost for a Peach border: From the oldest and best pasture land you have cut some turf in sods 4 inches thick (having first cut off the grass as close as possible). To one cartload of this turfy soil add two barrow-loads of bricks, broken small (the size of a hen's egg), then a good quantity of old mortar rubble (from old ceilings or what not), a quarter of a hundredweight of quarter-inch bones, the same of bone-meal, five pecks of lime, and three pecks of soot. Cut up the turf into pieces the size of a quarter of a brick and mix all well together. If you have not the turf, or cannot procure it, you must use the best soil you have in your garden. The items mentioned may be rather expensive, but if it is borne in mind that a Peach border, when once well made, will remain in good condition for twenty years or more, the cost in the first instance should not be regarded as excessive.

VINES IN A SMALL GREENHOUSE (Peccani).—Yes, November is a good time to plant Vines. Although the border has only recently been made, you ought to plant the new Vines in new turfy loam, the same as is generally used for planting Vines in. We do not mean renew the whole border, but, say, give half a barrow-load to each Vine. Shake all the soil away from the Vine roots, disentangle them carefully, and slightly cut back the points of all the roots (only an inch or so). The new soil should not be wet at the time of planting. Place the soil over and among the roots carefully with the hands in the first instance, pressing it down firmly. When planting is completed, tread the soil firmly down if it is fairly dry. The roots should only be buried 5 inches deep. Give a good watering after planting. This will settle the soil to the roots. Cover the border over with freshly fallen leaves, 10 inches deep when trodden down, and cover with a thin layer of straw (well corded down) to prevent it blowing about. The leaves should not be taken off until the first week in April. Combinations are fine things when it is to the mutual interest of the parties combining; when it is not, then look out for trouble. So it is with Ferns and Vines. Vines to do well must have complete rest in the winter by throwing the ventilators well open night and day, excepting when it is very windy or when there is extreme frost. If you must have Ferns, why do you not have hardy Scotch Ferns instead of foreign ones? When grown in pots under glass, they are quite as beautiful and far more interesting. Two excellent white Grapes to go with Black Hamburgh are Buckland Sweetwater and Lady Hutt.

KITCHEN GARDEN.

CUCUMBER DISEASED (M. Hoad).—The fungus on the Cucumber is *Cladosporium scabiei*. Probably the house has been kept somewhat too close, which is sure to give the conditions which encourage the attack of such fungi.

MISCELLANEOUS.

SOWING GRASS SEED (H. Goodman).—Two pounds of grass seed will be ample for the space of ground you wish to sow. Do not sow the seed until March; then select a suitable day when the soil is moderately dry, and sow the seed evenly over the surface. Rake it in well, roll it lightly, and protect it with old fish-netting or cotton, otherwise sparrows will play havoc with the seed.

USE OF SLOES (Soldier's Widow).—Sloe fruits are sometimes made into jelly, but it is doubtful whether you would find Sloe jelly a financial success with sugar at its present price. You had better experiment with a few, and obtain thereby some idea of the likely cost of gathering and preserving. You will then be able to judge as to whether you are likely to be able to dispose of the jelly to advantage or not. Blackberry jam or jelly would be more likely to prove a financial success.

TO MAKE A DRY TENNIS COURT (Dry Court).—A good dry tennis court can be made of asphalt. Excavate the ground 10 inches deep, place 6 inches of rough broken bricks at the bottom, on that 3 inches of coarse tarred macadam, then finish with an inch of fine asphalt. Or the bed may be filled to within 3 inches of the surface with bricks and clinkers, and be finished off with fine marl or burnt ballast. You would be well advised to

visit some recreation ground where such courts exist, and obtain a little information from the superintendent before you commence your court.

WHITE FLIES FOR INSPECTION (J. P.).—The flies attacking your plants are called white flies, and are allied to both scale insects and aphides. They are exceedingly troublesome pests, and to destroy them the house requires to be fumigated three or four times within ten days. Fumigants, unfortunately, do not destroy the eggs, and some of the scale-like young ones also escape. If you can combine fumigation with the dipping of the plant in the soft soap sulphur dip we have frequently recommended, it will be a considerable help.

FURNISHING A GARDEN (Frank Shearn).—If the bank is small, *Hypericum calycinum* would do; if of moderate size or depth, say, 3 feet to 4 feet, *Cotoneaster microphylla*; and if 5 feet or 6 feet deep, a *wichuraiana* Rose. Either of the last two would trail well; the former could be planted thinly over all. For the wall you cannot do better than plant the Ivies known as *Hedera Helix palmata* and *H. h. p. aurea* in mixture. If these are to quickly cover it, a number of small and young plants should be put out in a well-prepared trench, and not a few extra large old ones, which take more time. If you require flowering trees for the sides of the entrance, plant Paul's Double Scarlet Thorn; if an evergreen, *Cupressus lawsoniana aurea*. In all probability the latter would be best, because of the space apparently at disposal. The Thorn is very beautiful, but should not be nearer than 6 feet to the gateposts. *Rosa rugosa* and its white variety would make a good hedge if there is room for it to develop. Some good Roses as standards are *Caroline Testout*, *Prince de Bulgarie*, *General Jacqueminot*, *William Allen Richardson*, *Viscountess Folkestone*, *Star of Waltham*, *Ulrich Brunner*, *Rev. D. R. Williamson*, *Mme. Abel Chatenay*, *Lyon Rose*, *Killarney* and *Lady Hillingdon*. For a weeping Rose try *Excelsa* or *Minnehaha*. Lawn grass may be sown until mid-October in your locality. Of bulbous plants, Tulips in bedding, Cottage, May-flowering, Parrot and Darwin varieties would afford a display for nearly two months; while Daffodils, *Muscari*, *Fritillaries*, *Squills* and *Chionodoxas* would do the same. Write to some of the dealers advertising in our columns, all of whom make up collections of these things.

NAMES OF PLANTS.—*Cork*.—1, *Alyssum maritimum*; 2, *Hypericum reptans*; 3, *Gazania* species, specimen too scrappy to identify; 4, *Sedum spurium*; 5, *Campanula linifolia*.—*George Neil*.—*Nerine coruscans* major.

NAMES OF FRUIT.—*Mrs. Cumberland*.—1, *Bramley's Seedling*; 2, *Cox's Pomona*; 3, *Duchess of Oldenburg*; 4, *King of the Pippins*, dessert variety; 5, decayed; 6, *Glou Morceau*, dessert variety; 7, *Bellissime d'Hiver*, cooking variety; 8, *Marie Louise d'Uccle*, dessert variety. —*Nemo*.—1, *Newton Wonder*; 2, *Bismarck*.—*C. F.*—All the Pears arrived in a pulp. Sound fruit must be sent. Also see rules. —*H. G. G.*—Large Pear, *Beurré Diel*; small Pear, *Durondeau*. —*S. Dakin*.—The fruit is so similar to *Yorkshire Beauty* that it might be the same variety. —*A. D.*—1, *Mère du Ménage*; 2, *King of the Pippins*; 3, *Blenheim Orange*; 4, *Bess Pool*; 5, *Hawthornden*; 6, *Verulam*; 7, *Sugarloaf*; 8, *Kerry Pippin*; 9, *Queen Caroline*; 10, *Beurré Sterckmans*; 11, *Beurré Superfin*; 12, *King of the Pippins*. This is attacked by "bitter-pit."

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

DURING normal times one of the chiefest values of the fortnightly meetings of the above-named society is the object-lessons afforded of the variety obtaining in gardens as the season advances. On the last occasion the fruit-growers were to the front, while at the meeting held on the 3rd inst. the flower-growers held the field. Naturally, the *Chrysanthemum* was strongly in evidence, and while we have seen greater numbers, we have rarely seen finer quality or better displayed flowers. For one collection of these a gold medal was awarded, a silver-gilt Flora medal being awarded in two other instances. An exceptional exhibit for a November meeting was that of Dahlias from Mark's Tey, the flowers fresh and good. Of much merit, too, was the hardy Fern collection from Enfield. Orchids and fruit were but sparsely shown. The Orchid committee granted awards to four, and the floral committee to five, novelties.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), and Sir Jeremiah Colman, Sir Harry J. Veitch, Messrs. J. O'Brien, F. Monteith Ogilvie, T. Armstrong, Walter Cobb, J. Cypher, J. Charlesworth, J. R. Shill, S. W. Flory, W. P. Bound, Arthur Dye, H. G. Alexander, W. H. White, E. H. Davidson, W. Bolton, Gurney Wilson and de B. Crawshaw.

Only one or two small Orchid groups were staged at this meeting, though they contained not a few choice things. In that from Messrs. Sander and Sons, St. Albans, *Coleogyne mooreana* was prominent, the erect, foot-high raceme of chaste white, yellow-crested flowers showing to considerable advantage. In leaf growth and carriage it is quite distinct from the better-known *C. cristata*, which flowers in midwinter. *C. Brunnea* is an interesting species of the same genus, having short pendent racemes of yellowish green flowers. *Odontoglossum perculum* × *gandavense* has very dark-coloured flowers. *Cattleya Fabia alba*, C. Mrs. Pitt and *C. acis* (rich orange sepals and petals and reddish lip) were all noted in the group.

Messrs. Charlesworth and Co., Hayward's Heath, had a few particularly choice specimens, as *Odontioda Madeline*, *Cattleya Fabia alba* (fine variety), *Odontoglossum crispum*,

O. Areworth (of dark chocolate colour), *Lælio-Cattleya Neleus* (yellow, with crimson-purple lip), *L.-C. Thyone* (yellow sepals and handsome crimson-brown, much-reticulated lip) and the ever-welcome, pure white-flowered *Dendrobium Dearingi*, which is indispensable to any collection at this time. Some of the more important novelties certificated at this meeting were also in this group. (For these see "New and Rare Plants," page 558.)

Mr. E. V. Low, Hayward's Heath, staged half a dozen distinct varieties of *Cattleya labiata*, viz., *Daphne*, *La Vièrge*, *R. J. Measures*, *W. R. Lee*, *Pride of Southgate* and *Mrs. E. Ashworth*, the little group of well-flowered specimens making a goodly show.

FRUIT AND VEGETABLE COMMITTEE.

Present: A. H. Pearson, Esq. (chairman), and Messrs. J. Cheal, E. Beckett, A. R. Allan, H. Markham, H. J. Wright, E. A. Bunyard, W. Poupart, A. Bullock, W. E. Humphreys, A. Grubb, A. W. Metcalfe and Owen Thomas.

From Messrs. W. Seabrook and Sons, Chelmsford, came a collection of thirty-eight dishes of fruit, the whole, save four varieties of Pears, being Apples, of excellent quality and finish. They represented much the same type of excellence, indeed, as was seen in at least two collections at the previous meeting. *Blenheim Orange*, *Cox's Orange Pippin*, *The Queen*, *Allington Pippin*, *King of Pippins*, *Bramley's Seedling*, *Lane's Prince Albert*, *Newton Wonder*, *Warner's King*, *Beauty of Kent*, *Emperor Alexander*, *Peasgood's Nonsuch* and *Royal Jubilee* were among the best sorts of Apples; while the Pears *Emile d'Heyst*, *Catillac* and *Uvedale's St. Germain* were all very fine. *Silver Knightian* medal.

From Bedfords, Havering, Romford, Sir Montague Turner (gardener, Mr. A. Humphreys) sent a small collection of high-class fruits, which included *Black Alicante* Grapes, Apples, Pears and a dish of Guavas. The dishes of Pears of *Emile d'Heyst*, *Durondeau*, *Pitmaston* *Duchess* and *Marie Louise* were particularly handsome-looking examples and well finished; while such Apples as *Cox's Orange Pippin*, *Ribston Pippin*, *King of Pippins*, *Peasgood's Nonsuch*, *Allington Pippin* and *Christmas Pearmain* also claimed attention. *Silver Banksian* medal.

Bunches of the outdoor Grape *Reine Olga de Wurtemberg* were sent by Mrs. Watt Black, Edenbridge, and for the purpose named the variety is one of the more useful sorts.

Dishes of four varieties of Quince, viz., *Champion*, *Portugal*, *Borgeant* and *Pear-shaped*, were sent from the Society's gardens at Wisley. The fruits were of large size.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. E. A. Bowles, J. Green, G. Reuthe, R. Hooper Pearson, J. T. Bennett-Poë, W. J. Bean, J. Hudson, J. F. McLeod, J. W. Moorman, C. R. Fielder, F. W. Harvey, W. Howe, T. Stevenson, J. Jennings, W. Bain, J. Dickson, C. Dixon, H. J. Jones, C. E. Shea, C. E. Pearson, W. Cuthbertson, W. P. Thomson, E. H. Jenkins, G. Paul and W. H. Page.

Messrs. Dobbie and Co., Edinburgh, staged some three dozen vases of *Collarette Dahlias*, as fine in quality, almost certainly as rich and varied in colour, as we are wont to see in September. The exhibit in itself was evidence of the exceptionally mild weather and the immunity from frost experienced in certain districts, while as a display of colour the group was welcome indeed in November. *Doon* (rich orange scarlet), *Purity* (white), *Balmoral* (cerise), *Prince of Orange*, *Cloch* (mauve with creamy inner florets, a most charming thing), *Diadem* (rose cerise) and *Deveron* (deep rose) cerise with white inner florets) were among the best and showiest in a particularly good lot.

Messrs. Rasmussen and Crone, Woodbine Nursery, Wanstead, N.E., showed a capital group of *Begonia Gloire de Lorraine*, together with plants of *Clibran's Pink* and *The Gem*. All the plants were well-grown, compact examples.

Messrs. Barr and Sons, Covent Garden, W.C., displayed a superb lot of *Nerines*. Over three dozen vases of these indispensable greenhouse flowers were staged. The collection embraced many fine examples of *Epic* (rose), *Lady Clementine Mitford* (flesh pink), *Lady Mary Shelley* (delicate flesh), *Flashlight* (rich scarlet), *Miss Carrington* (rose, shaded white at the edges) and *Striped Beauty*. In addition, *Helleborus niger altifolius*, the *Gladwyn Iris* (*I. foetidissima*), of which a superb lot of fruiting pods were shown, and an assortment of *Crocus* species were also on view. Of these, *ochroleucus*, *Hadriaticus*, *sandersianus* and *chrysobolonicus* are all white-flowered and very charming. *Kniphofia aloides glaucescens*, *Iris stylosa* and *Violet La France* were also shown.

The Misses Hopkins, Shepperton-on-Thames, had a small exhibit of alpine, among which were *Sedums*, *Dianthus deltoides*, *Gentiana acaulis*, *Polycnemum vacciniifolium*, *Viola Bowles* Black and others of miniature growth.

Messrs. H. B. May and Sons, Edmonton, displayed a table of winter-flowering *Begonias*, as *Exquisite*, *Mrs. Heal*, *Optima*, *Winter Cheer*, *Glory of Cincinnati* and *Gloire de Lorraine*, all of which were set in group form. *Statice profusa* (good in colour and distinct), *Hydrangea Mme. E. Moulière* (white), and a well-flowered batch of *Cyclamens* were all included, with Ferns, in an interesting exhibit.

Mr. J. J. Kettle, Corfe Mullen, near Wimborne, Dorset, showed some three dozen vases of *Violets*, chiefly of the varieties *La France* and *Princess of Wales*. The flowers were of fine size, and with giant stems displayed themselves to advantage. They were an admirable lot.

Mr. G. Reuthe, Keston, Kent, showed a goodly grouping of *Aster Tradescantii* (white) and a large array of *Nerines*, among which *N. flexuosa alba*, *N. cornucans major*, *N. Nellie Reuthe* (rose) and *N. Kitty* were distinct. *Crocus*

marathonisius (very fine white), *C. longifolius*, *C. media* (one of the best dark-flowered sorts), *Pernettyas* of sorts and a variety of alpine were also on view.

Messrs. Stuart Low and Co., Enfield, showed winter-flowering *Begonias*, as *The Gem*, *Optima*, *Emita*, *Mrs. Heal*, *Exquisite* and other notable sorts.

Messrs. Stuart Low and Co., Enfield, had a superb lot of *Carnations*, showing amply filled vases of *Princess Dagmar* (crimson), *Gorgeous*, *Philadelphia* (pink), *Mrs. Mackay Edgar* (a fine seedling from May Day), *Satin Robe*, *Mary Allwood* and *Mrs. C. F. Raphael*.

Mr. Clarence Elliott, Stevenage, showed a charming lot of *Gentian* flowers, together with pot-grown examples of *Crocus pulchellus*, *C. sativus*, *Potentilla willmottiana* and a variety of other alpine.

Mr. L. R. Russell, Richmond, displayed a floor group of *Aucubas*, *Crataegus*, *Symphoricarpos mollis*, *Ivies*, *Bamboos* and other plants in variety.

E. G. Mocatta, Esq., Woburn Place, Addlestone (gardener, Mr. T. Stevenson), was awarded a gold medal for a superbly arranged group of *Chrysanthemums*, which embraced single, decorative and exhibition sorts. The bold, handsome vases of flowers, ornamented by *Osmunda* fronds and occasionally interspersed by *Crotons*, *Aralias* and like plants, were of a most imposing character, and evoked much praise. *Cranford Yellow*, *H. W. Thorpe* (white), *Source d'Or*, *Virginia* (white) and *Mrs. E. Tickle* (pink) were all good. *Celia* (yellow), *Mensa* (white), *Ceddie Mason* (crimson), *Charles Kingsley* (yellow), *Bronze Pagram*, *White Beauty* and *Mrs. Loo Thomson* (primrose) are all singles, and constituted a front line to this excellent group.

Messrs. J. Peed and Sons, West Norwood, S.E., had an extensive group of *Chrysanthemums*, using a big line of *Stuart Smith* (white, semi-double) in the background. *Charles Kingsley* (yellow), *Buttercup*, *Geoffrey Peed* and *Fred Humphries* (red) are singles chiefly, and of good decorative merit.

Messrs. H. J. Jones, Limited, Lewisham, S.E., set up a magnificent collection of *Chrysanthemums*, the back line of vases, composed in each case of about a score of giant blooms, all of exhibition standard, evoking much praise. There were fifteen of these vases; hence the imposing character of the group is easily gauged. *Bob Pulling* (yellow), *Mrs. E. Tickle* (pink), *Mrs. R. C. Pulling* (yellow), *J. Surry* (crimson), *Mrs. Wiseman* (white, incurved), *R. Crocker* (pink) and *Romance* (golden) were all of exceptional merit. The front line was made up of singles naturally arranged in bowls, and in this way constituted a good setting to a very fine lot.

Messrs. Allwood Brothers, Hayward's Heath, showed some excellent *Carnations*, *Carola*, *Princess Dagmar* (both crimson), *Salmon Enchantress*, *Wivelsfield White*, *Mary Allwood*, *Gorgeous* and *Champion* being a few of the best in a particularly nice, fresh-looking lot.

Messrs. Waterer, Sons and Crisp, Limited, Bagshot, Surrey, showed herbaceous flowers, as *Michaelmas Daisies*, *Eryngiums*, border *Chrysanthemums*, *Iris stylosa*, *Salvia Grahamii* (scarlet), *Iris alata*, *Sedum pilosum*, *Kniphofia Nelsoni* and other useful plants.

Mr. C. Engelmann, Saffron Walden, showed *Carnations* *Enchantress Supreme*, *White Wonder*, *Gorgeous*, *Lady Northcliffe*, *Lady Meyer* and others, all of fine quality.

The Misses Price and Fyfe, Lee, S.E., displayed *Chrysanthemums* in variety, *Mrs. Andrew Walker* (deep bronze) being very fine. *Carnations* *Enchantress Supreme*, *Mikado*, *Kenneth* (both fancies) and *Mrs. Ward* (cerise) were also from the same source.

Mr. W. Wells, jun., Merstham, had quite a show of *Gentiana acaulis* with *Erica mediterranea hybrida* and other plants.

Messrs. Wells, Merstham, had a good show of *Chrysanthemums*, single and double. *Ideality* (white, single), *Ceddie Mason* (crimson, single) and *Caterham Bronze* (single) were very good. *Queen Mary* (giant white), *Thomas Beeson* (bronze) and *Mrs. R. Luxford* (bronze) are large-flowered sorts. *Petite Jeanne* is a pure white of useful size for cutting.

Messrs. H. Canneil and Sons, Eynsford, Kent, had an admirable lot of *Zonal Pelargoniums*. *Queen of Italy* (pink), *Sir Thomas Hanbury* (deep crimson), *Vesta*, *Hall Caine*, *The Sirdar*, *Maxime Kovalevsky* (all brilliantly flowered sorts) were very fine. *Mrs. J. Ward* is a particularly large-flowered variety of salmon colour.

Messrs. J. Cheal and Sons, Crawley, showed cut shrubs, among which were five species of *Symphoricarpos*, viz., *racemosus*, *montanus* (pink fruited), *Heyeri* (small creamy-coloured fruits), *vulgaris* (red) and *occidentalis* (creamy fruited and of distinct leafage). *Ceanothuses*, *Acers*, *Pernettyas*, *Veronicas* and *Baccharis balimifolius* were also noted.

Mr. Norman Davis, Framfield, Sussex, had an excellent table of *Chrysanthemums*, single, decorative and others. *William Turner* (large-flowered white), *Glorious* (yellow), *Mensa* (white), *Mrs. Loo Thomson* (primrose) and *Excelsior* (bronze) were singles of high merit. *Dandy* (reddish), *Mrs. G. Drabble* (white), *F. A. Wheeler* (bronze) and *His Majesty* (crimson), all large-flowered sorts, were others of note.

Mr. Amos Perry, Enfield, staged a very remarkable and comprehensive collection of *Polystichums*, a much-valued genus of hardy evergreen Ferns which, during the late summer and autumn months, are often at their best. There were some four or five dozen sorts, chiefly, however, of the variations of *P. angulare*. Of these, the very handsome *P. a. divisilobum plumosum densum superbum* (see page 558) was the most conspicuous. It is a plant of high ornament and distinction. Other distinct sorts included *P. a. d. densum*, *P. a. d. plumosum densum*, *P. a. d. robustum*, *P. a. grandiceps*, *P. a. frondosum*, *P. a. f. decompositum* (with neatly cut pinnules), *P. Lonchitis* (Holly Fern), *P. aerostichoides* and *P. munitum*.

THE GARDEN.

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NOVEMBER 21, 1914.

NOTES OF THE WEEK.

Sir Herbert Maxwell's Lily Articles.—In response to enquiries from a number of readers as to the promised articles on Lilies by Sir Herbert Maxwell, Bart., we are now able to state that these will commence in the first issue of next year. By starting these articles then it will ensure them all appearing in the same volume, which will be more convenient for those who bind their copies than spreading them over two volumes.

A Good Autumn Rose.—When inspecting a large collection of Roses on November 10, we were much interested in a bed of *Corallina*. The plants were as full of flower as one would expect to find them in July, and the quality was but little inferior to what it is earlier in the year. Indeed, many of the blooms would not have disgraced a summer show. On several previous occasions we have noticed how good this Rose has been in autumn. Although classed as a Tea variety, it makes vigorous, erect growth, and the beautiful coral red blooms stand up well on long, stout stems. It was raised by Messrs. William Paul and Sons, and first sent out by them in 1900.

A Little-Known Pyracantha.—The rather rare shrub *Pyracantha crenulata* has been very attractive at Kew during the present autumn by reason of its profusion of bright red berries, comparing well with the better-known *P. coccinea*, or *Cratægus Pyracantha* as it is frequently called. *P. crenulata* is a native of the Himalaya and China, and is a rapid-growing shrub, with rather larger and thinner leaves than the ordinary *Pyracantha*. The white flowers are borne in May, and the bright red berries, which are rather smaller than those of the better-known species, ripen in October. It may be planted in a shrubbery in ordinary garden soil, or may be placed in the open and allowed to develop as an isolated specimen. As a wall plant it may be considered to be of similar use to *P. coccinea*.

A Charming Autumn Crocus.—When at Kew a few days ago we were very charmed with a small bed of *Crocus longiflorus* situated by the Rose pergola. Although the circular bed was barely 2 feet in diameter, there must have been well over a hundred of the beautiful lilac blue flowers. Each of these has a vivid orange stigma, which adds not a little to its attractiveness. This charming

November Crocus is a native of Southern Italy, and deserves to be cultivated wherever a sunny spot can be devoted to it.

A Beautiful Golden Cypress.—Those who wish for a handsome and distinctive-looking evergreen should secure *Cupressus obtusa Crippsii*. This makes a particularly pleasing shrub of columnar form, its rather loosely placed branches avoiding the stiffness that to many is objectionable in a number of other Cupressuses. The foliage is of a pleasing golden shade, mixed with dark green and as an isolated specimen in a lawn bed it would be particularly pleasing.

Erica Cavendishii.—This is one of the few greenhouse Heaths, so much grown in years gone by, that still retains its old-time popularity.



ERICA CAVENDISHII, A BEAUTIFUL GREENHOUSE HEATH WITH GOLDEN FLOWERS.

during the season—that is to say, principally in early summer—delightful specimens, such as are herewith illustrated, are freely brought into Covent Garden Market, grown either in 5-inch or 6-inch pots. A notable feature of *Erica Cavendishii* is the bright yellow colour of its blossoms, in which respect it stands out markedly from all its fellows. It is regarded by our different authorities as of hybrid origin. These greenhouse Heaths are all exceedingly chaste and beautiful; but with very few exceptions they are now seldom seen.

November-Flowering Evergreen Shrub.—Under the several names of *Fatsia japonica*, *Aralia japonica*, *A. Sieboldii* and the Castor Oil Plant, a very valuable Japanese plant is grown extensively in pots for greenhouse and room decoration.

Though a very valuable plant for these purposes, it is as an outdoor subject that its greatest beauty is seen. Particularly happy in the town and suburban garden as a lawn specimen or in the shrubbery border, those who have grown it regard *Fatsia japonica* as one of the most beautiful evergreens for London gardens, further South and in the West. Most attractive at all seasons with its large leathery, shiny green leaves, it is in November, when flowering freely, that we see the full beauty. The flowers are milky white, individually small, but very freely and effectively produced in large branching inflorescences on bushes 4 feet to 8 feet or more in height.

Pear Crossed with Quince.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. J. C. Allgrove of the Langley Nursery showed several fruits of the Pear raised by Mr. John Seden from the Pear *Bergamotte Esperen* crossed with pollen from Portugal Quince (see *Journal of the Royal Horticultural Society*, Vol. XXXIII., pages clxvii. and clxxi). The fruits of this type are essentially Pears, very similar in shape and appearance to *Easter Beurré*, very short-stalked, roundish, and plentifully dotted all over with large dots. The flavour is good and the Pear ripens long before its Pear parent *Bergamotte Esperen*, being fit to eat at the end of October. It will be remembered that the other plant raised from the same fruit was Quince-like in form, and never becomes soft.

A Useful Evergreen Climber.

During spring and summer, when our gardens are full of other flowers, such useful and ornamental foliage plants as *Smilax* are often overlooked. We were recently admiring some white *Chrysanthemums* growing in front of some *Smilax* against a wall, and the effect of them against the dark background was very striking. The *Smilax* may not be perfectly hardy in all parts of the country, but if placed against a wall in well-drained soil and covered with pieces of stone, through which the young *Asparagus*-like shoots are not slow to appear. Should they be cut to the ground during severe weather, they soon sprout up again. *Smilax Cantab.*, *S. laurifolia*, *S. rotundifolia*, *S. excelsa*, *S. aspera*, *S. tannoides* and *S. glauca* are a few of the best.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Nerines.—There were one or two pretty displays of this delightful autumn-flowering plant at the Royal Horticultural Society's show on the 3rd inst., and there is little wonder that each succeeding year sees the Nerine more and more to the fore. Messrs. Barr made a departure by exhibiting cut spikes in vases with fronds of *Adiantum*; but I still think the method of showing the plants in their small pots as grown the more attractive one. Anyone with a little greenhouse space to spare can grow the Nerine, and it is the plant *par excellence* for the intelligent amateur who would like to devote his spare time in the fall of the year to a little hybridising and seedling-raising.—F. H. C.

Saxifraga Fortunei.—I enclose a photograph of *Saxifraga Fortunei*, in case it may be interesting enough to reproduce. It was taken on October 16 last year. This Saxifrage was planted in the autumn of 1909, and is in a position where it only gets late afternoon sun in the winter, though in the summer it has sun nearly all day. This year it again has two spikes of flower, but they are not nearly as tall.—CONSTANCE FAWKES, Bayshill, Cheltenham.

Winter-Flowering Begonias.—In the issue of THE GARDEN for November 7 I expressed regret at the dispersal of Messrs. Veitch's fine collection of these beautiful flowers. There is apparently, however, a successor within the London area; for at the meeting held at the Royal Horticultural Hall on November 3, Messrs. Stuart Low and Co. of Enfield exhibited a group of the best forms. It is to be hoped that the mantle of Messrs. Veitch will descend upon the new-comers in this line, and that Messrs. Low will be as successful as were their predecessors in the production of new varieties.—H. P.

Vitis Thomsoni.—The past hot summer has been followed by fine autumn tints. *Vitis Thomsoni* is now a brilliant red, almost as bright as *Vitis inconstans* (*Ampelopsis Veitchi*), and, strange to say, though growing for many years on this house, it has never before attained the same rich colour. It is the more acceptable now, most of the leaves of the Virginian Creeper and *Ampelopsis Veitchi* having fallen. *Vitis Thomsoni* is also a contrast to other climbers in summer from its very dark green leaves and its graceful habit of growth. Our plant covers a considerable space of wall.—J. H. W. THOMAS.

Moss on Tennis Court.—Your correspondent "G. J." evidently has to deal with a sand court situated in a somewhat damp spot, and consequently the recurrence of moss is not to be prevented by one operation, as is evidenced by the statement that weed-killer has failed. A cheap and effective remedy would be to apply now a dressing of powdered lime, and in a fortnight's time to follow this with a similar dressing of common salt. Soiled salt can be purchased very cheaply for this purpose. Three to four ounces to the square yard will be necessary for each dressing if the mossy growth is dense. A few days after applying the salt the court should be

well swept with a stiff broom. Treated thus, moss will be kept at bay for a considerable time; but as soon as signs of a fresh growth appear, another application is necessary.—HEATHER BELL.

Propagating Perpetual-Flowering Carnations. Seeing that this question has cropped up again through the notes of Mr. Brotherston, I venture to repeat that the commercial grower long since satisfied himself as to the advantage of striking cuttings in January or February rather than in the autumn. If autumn rooting gave better plants, surely the men whose combined cultures must total millions of plants would not adopt spring rooting. In the first place, taking of cuttings in the autumn means so many fewer blooms in the winter from the stock plants. Furthermore, autumn-struck cuttings have to face a period of



SAXIFRAGA FORTUNEI IN MRS. FAWKES' GARDEN AT BAYSHILL, CHELTENHAM.

dull weather and shortening days. It is idle to claim that autumn-struck plants will give a greater crop in a given period, for the commercial man is out for quantity as well as quality. The spring-struck plant commences to crop by early October, often earlier, and if the variety is not addicted to coming in crops, it will never cease blooming until thrown out. On a great commercial grower's showing we know that a January or February struck plant will outyield an autumn-struck one over a given period; and considering the fact that this type of Carnation is never at rest, why advocate a method that entails one winter over and above what is essential in a plant's life-history? I am prepared to agree that late summer-struck cuttings are better for open ground culture and infinitely more easy for the amateur to handle. Incidentally, I might mention that I had on November 1

several first-rate blooms of *Britannia* on plants that have been in a bed for the past eighteen months. This variety is superior to any other Perpetual-flowering Carnation for the open ground, as it does not rot so freely in damp weather.—T. A. W.

Myosotidium nobile from Seed.—The value of seeds as a means of increase is very great—greater, perhaps, than in these days is recognised, when we have become so dependent on plants to name derived from cuttings or similar means of propagation. This sentence will serve as an introduction to what I want to write about *Myosotidium nobile*, a note concerning which you were good enough to publish earlier in the year. I received the plant just twelve months ago, taken up from the garden of the late Miss Patricia Dalrymple, with whom for many long years I had carried on a reciprocal give-and-take in garden and greenhouse plants. This, the last of her gifts, I should have been more than sorry to have lost, and though the plant thrives here and there in Scotland in the more genial parts, I was dubious about trusting it to the mercy of our east winds, notorious for their cutting properties. So I saved all the seeds the plant had matured in the early summer and had them sown directly. Some germinated in a short time, and the seedlings have been appearing a few at a time up till the present. The plants from the first and second batches are in 9-inch and 10-inch pots, with foliage almost as large as that produced by the parent plant. I am now anticipating the appearance of flower-spikes before very long, and anyhow shall have the pleasure of planting a lot of the seedlings in selected positions out of doors. I knew the conditions under which this plant thrives in its native island—loose sandy soil by the seaside—so the seeds were sown in leaf-soil and loam, and the plants have been potted in about equal parts of the same material, only with lumps of turf instead of loam for the larger plants. The compost was only slightly firmed, and the plants are growing in a cool house with abundance of fresh air blowing about them. At Enys I believe the *Myosotidium* borders are regularly dressed with seaweed, but I do not know that this is essential. We have here plenty of flaky leaf-soil, which I hope to utilise when planting. It proves splendid rooting material, is fairly lasting, and retains moisture for a long time once

it is wet, having previously been made very firm.—R. P. BROTHERSTON.

Mildew-Proof Roses.—My experience has taught me that few such varieties exist, and I lay the blame, chiefly, at the door of those who raise our new Roses. The idea to-day seems to be to get a new thing, something fresh, and it is very questionable—judging by the behaviour of many recent varieties—whether the possibility of being mildew-resistant is ever considered. Admitting this, however, there is still much to be said for the varying districts and positions in which Roses are grown. The same varieties are far freer from its onslaught in some places than others. Mildew-proof climbing Roses with us are American Pillar, Blush Rambler, *Félicité Perpétue*, Jersey Beauty and Psyche. Small-flowered Roses—Jessie, Mrs. Cutbush and Orleans.

Other varieties, such as Rosomane N. Thomas, Irish Elegance, Dorothy Page-Roberts, General Macarthur, Mme. Edmée Metz, Lady A. Stanley, Commander J. Gravereaux, Ulrich Brunner and Miss Cynthia Forde, are also practically immune; while La Tosca, Mme. Ravary, Dr. Andry, Marie Baumann, S. M. Rodocanachi, Maman Cochet and Corallina are so very seldom attacked that I do not hesitate to affirm them as being varieties little predisposed to mildew.—C. TURNER, *Highgate*.

— I was much interested in the notes in your last two issues on mildew-proof Roses. I give below a list of Roses which are exceptionally free from mildew in these gardens: Lady Alice Stanley, Reine W. Urban, Dorothy Page-Roberts, Lady Ursula, Lady Pirrie, Margaret, Mrs. C. Allen, M. Paul Lédé, Joseph Hill, Mme. Second Weber, La Tosca, White Caroline Testout, Mrs. W. C. Miller, Edu Meyer, Beauté de Lyon, Mrs. John Laing, Château de Clos Vougeot, Souv. de Marie de Zayas, Gustav Grünerwald, Helen Keller, Marjorie, Grace Molyneux, Mrs. David McKee, Sunburst, Lyon, Richmond, Frau L. Rautenstrauch, Countess of Shaftesbury, Pharisæer, Duchess of Wellington and Caroline Testout. A few of the worst offenders here are Betty, Lady Ashtown, George Dickson, Ethel Malcolm, Theresa, Viscountess Enfield, Killarney, Harry Kirk and British Queen. I may add that the soil is very wet and of a clayey nature.—JOHN HEXTALL, *Dunscar Gardens, Bolton*.

— I was more than ordinarily interested in "Somerset's" letter, page 528 of October 31 issue, on this subject. I have until this year been under the delusion that many varieties were mildew-proof. I am now rather sceptical as to whether there are any entirely so under every climatic condition. This year the only three varieties that showed no trace of this dread fungus were Grüss an Teplitz, Château de Clos Vougeot and Beauté de Lyon. Others not very seriously attacked were General Macarthur, Mrs. Edward Powell, Gustav Grünerwald, Mme. Melanie Soupert, M. Paul Lédé, Marquise de Sinety, Mme. Maurice de Luze, Liberty, Mrs. David McKee, Ulrich Brunner, J. B. Clark, Hugh Dickson and Prime-rose. All the others of our 170 odd varieties were more or less seriously disfigured. The worst probably were Mme. Ravary, Frau Karl Druschki, George Dickson, Mrs. R. G. Sharman Crawford, Mrs. A. R. Waddell, Killarney, Juliet, Mme. Abel Chatenay, Viscountess Folkestone, and York and Lancaster. I never before saw the last named so seriously attacked. Late in the season I noticed the soft points of Dorothy Perkins on arches become quite white with mildew, but Lady Gay on a west wall showed but small traces of the disease. The Scotch Briars kept wonderfully healthy. Like "Somerset," I have no faith in any of the so-called specifics. I tried several this season, and found them as effective as cold water. If raisers cannot produce mildew-proof varieties, can nobody invent a really certain cure?—C. BLAIR, *Preston Gardens, Lidlithgow*.

FORTHCOMING EVENTS.

November 30.—National Chrysanthemum Society's Floral Committee Meeting, Essex Hall, Essex Street, Strand, London, W.C., 4 p.m. The public will be admitted free.

December 1.—Royal Horticultural Society's Exhibition of British-grown Fruit, Royal Horticultural Hall, Vincent Square, Westminster, 2 p.m. to 4.30 p.m.

THE BOG GARDEN AND ITS FORMATION.

OF the many phases of open-air gardening, none, perhaps, is fraught with greater possibilities, and none, certainly, possessed of greater charms, than the bog garden if well and rightly conceived. It is in this type of garden that we see plants grow, flourish and blossom that too frequently are met languishing for the moisture they love in the open border. Indeed, one of the great charms of bog gardening is that the plants thrive and grow apace, and that nothing droops or dies, simply because the subjects are rightly placed and constantly provided with the moisture so essential to their well-being. But in the bog garden, as in all else, there is just the possibility of the strong crowding out the weak—just the possibility that by one false step, made unwittingly, a plant may be introduced that may prove a nuisance for years. Hence, at the outset, there is the same need for discretion and for that close, intimate knowledge of the subjects chosen for the work, of their slow or quick growth as well as their ultimate development, as there is in any other phase of gardening work.

The host of plants benefiting by constant supplies of moisture during a hot season may tempt some to introduce those that intrude their presence in all directions, or that quickly choke or overrun others whose finer attributes render them far more desirable for such a place. Of such as the former many examples might be given, though one, the *Epilobiums*, will suffice for all purposes. Here we have a small group of rapidly increasing plants that appear to grow all the year round, sending out such vigorous stolons or underground shoots or stems which, springing up some distance from the original, soon make their presence felt in their new homes. For such as these, then, welcome as they are in the wild garden, there is no room—there should certainly be no place—in the bog garden we have in mind, and no quarter should be given to the smallest seedling which might appear. Thus it will be seen that, in our opinion, a bog garden should not be a sort of dumping-ground for any and every moisture-loving plant; rather should it be a spot—an adjunct to the garden proper if you will—to be enriched and beautified with the choicer subjects of other climes as well as those of our own land, subjects which, revelling in moisture, know no happier place than the natural bog.

But some may say, very few gardens are possessed of or include a naturally boggy spot; hence, if we would grow such things as delight therein, an artificial substitute must be arranged. In connection with this not infrequent question arises the all-important point as to whether the abode for such plants must be made water-tight. The correct answer depends not a little on the nature of the subsoil. Where a retentive, plastic clay soil exists, a veritable dribble or trickle of water will maintain the soil in a state of semi-saturation, sufficient, indeed, for all purposes. On the other hand, where the subsoil is of sand or gravel, a slight excavation of this will be required to admit of the introduction of well-tempered clay, than which nothing is so good or so natural. A lowering, too, of the ultimate surface soil is desirable in those instances where a light soil obtains, to

admit of the water from the rainfall finding its way into the bed.

In all large gardens in hilly districts, the forming of an artificial bog garden or bed is quite an easy matter. The ideal condition for such is when a fountain basin exists on the terrace lawn, with the overflow tumbling into a rock garden pool a few feet below, and in turn trickling away into the woodland lower down, where it can be used to advantage for the purpose we have in mind. In just these happy circumstances, many years ago I spent much time in adding beauty to a phase of gardening not then common, and where the founder of the garden delighted on occasion to roam. An opening in the wood gave all that was desirable, and with sun and warmth and varying degrees of moisture a large area was furnished with the plants varying from such carpeting subjects as *Anagallis tenella*, *Sibthorpia europæa*, *Linnæa borealis* and *Pratia angulata* to the giant Royal Fern, *Osmunda regalis*, of several feet high and through.

There are also peat-loving and loam-loving plants, handsome Lilies as *pardalinum* and *superbum* that reflect their greatest beauty in the woodland bog garden, while dozens of others, *Primulas*, *Trilliums*, *Sarracenias*, *Parnassias*, *Dodecatheons*, *Cypripediums* in variety, *Saxifraga Hirculus*, Marsh Marigolds, Orchises, *Pinguiculas*, *Droseras* and the like, may all be grown to perfection in a few square feet of bog. There are, of course, *Primulas* such as *P. japonica* and *Saxifragas* such as *peltata* that are not quite suited to the smallest of these bog-beds, unless, indeed, they be given place at the outer margins where the chief supply of moisture enters. Just what is suited to any and every case will, of course, depend entirely upon circumstances. Happily there are plant giants like the *Gunnera*, *Osmunda* and *Spiræa*, together with the miniatures I have already named, that make bog gardening possible in large and small gardens alike, and where the plants of our own marshes and woods may, with others from the higher mountains of Europe and elsewhere, jointly play their part in making this aspect of gardening one of the most fascinating of the year.

E. H. JENKINS.

AUTUMN-FRUITING STRAWBERRIES FOR AMATEURS.

THIS season, in many parts of the country, has been a favourable one for the ripening of late fruits; and, in addition, the plants have made fine crowns and promise well for the future. There are now several distinct autumn-fruiting varieties, and they can be grown at a small cost as regards labour and space, so that they should in the future become better known. Since the advent of the earliest introduction, St. Joseph—raised in France by crossing a true alpine with a garden variety, which furnished us with an entirely new race of autumn fruits—have come the larger St. Antoine de Padoue, of which St. Joseph is one of the parents and the popular Royal Sovereign the other; and Laxton's Perpetual, in which also the popular St. Joseph has been used as one parent and the large Monarch or summer fruiter the other, and it is certainly a fine fruit of the autumn type, richer than St. Antoine de Padoue and the shape more after Monarch, with a deep red colour and

good flavour. Doubtless the varieties before noted are only the forerunners of a distinct type of autumn-fruiting Strawberries.

Of other alpine forms there are some good varieties, such as Alpine White or the Blanc Ameliore of the French; Bergeri, a rich crimson, medium-sized fruit and a very free bearer; and one that is a great favourite at Gunnersbury House called The Gunnersbury, a large, long fruit, deep red and very prolific.

Of true perpetual types, a year or two ago I noted a fine lot of Alphonse XIII., a round, white-fleshed fruit, rich and good; but white fruits do not find much favour in this country, and I prefer the larger Louis Gauthier, a pale white with pinkish shade and of excellent flavour.

In the culture of these Strawberries the work, to yield a late supply, should be varied. For use in August and September I prefer an open, sunny quarter, and if the runners are planted in well-cultivated soil enriched with manure, they will give an early crop. For instance, runners planted in the autumn will give a full crop in August and September of the following year. I have planted in April and had a good autumn supply. As I have previously noted, the perpetuals are mostly of compact habit; but there is no gain in crowding, as the fruit is produced at a season when the days are shortening and the sun less powerful. It is an advantage to give room, so that the fruits are freely exposed. If planted in rows 18 inches apart and 12 inches is allowed between the plants, this will suffice, but I prefer more room between the plants in the row.

Runners are produced freely, and these may be detached from the plants and put into 3-inch pots when ready, and when strong enough placed in 5-inch pots for November supplies, removing the flowers as they show till the end of August. I prefer to plunge the pots, as it saves watering. These plants, if placed on shelves early in October, will give the latest fruits, and they will take liberal supplies of food. Another plan, and one that will meet with more general approval, is to pot up strong runners in June or July direct into the fruiting pots and grow on a cool coal-ash base through the summer, keeping them clear of runners and flowers till the end of August, or even later for a November supply. When housed the plants require very little warmth to set and swell up their trusses; 50° to 60° is ample, and they do well on shelves. If grown in a frame, moisture must be given sparingly when the weather is sunless, and the plants should be near the light and ventilated freely in fine weather. Plants may be placed in frames in October and merely sheltered from heavy rains, transferring them to the shelves as required; by this means fruit may be had in December.

In the open, runners planted in autumn fruit early in August, and spring runners give a later crop, but here the same procedure is required as regards removing the earlier blossoms to get the fruits at the season required. G. W.

PEAR CHARLES ERNEST.

ALTHOUGH this Pear is not yet widely known, it is an excellent dessert variety, and fruits well grown in almost any form. In the accompanying illustration it is depicted as a pyramid, a type of tree that is admirably adapted for small gardens.



A YOUNG PYRAMID TREE OF PEAR CHARLES ERNEST. THIS IS A GOOD DESSERT VARIETY AND NOW IS THE TIME TO PLANT.

In appearance the fruit resembles that of Souvenir du Congrès; the flesh is snow white, juicy and melting, and the flavour refreshing and excellent. It is in season during November and December. When shown before the Royal Horticultural Society in 1900, this Pear received a first-class certificate, and experience gained since then proves that the honour was well deserved. As the planting season is now with us, those who are desirous of adding to their existing varieties should certainly give Charles Ernest a place. It was raised by M. Ernest Baltet of Troyes, France, and first put into commerce by him in 1879.

GARDENS OF TO-DAY.

BOSAHAN, CORNWALL.

AMONG the many beautiful and interesting gardens to be found in the county of Cornwall, few possess greater charm or wealth of rare vegetation than Bosahan, or the House on the Haven. The present mansion, which is the seat of Sir Arthur Vivian, is quite modern, having been built by himself and Lady Jane Vivian about thirty years ago on the site of an old and historic residence, and it would be difficult to find a situation that is at once so secluded and yet commands such a wonderful view of the English Channel. Bosahan is situated on a narrow point of rocky land that stretches well out into the Channel, and to reach it the visitor either has to cross that arm of the sea known as Helford Passage or take a long overland route *via* Helston. It is not our intention, however, to dwell upon the natural beauties to be seen in this corner of our westernmost county, but to give a few details of the many interesting features to be found in the gardens that surround the mansion and extend for a considerable distance into delightfully wooded vales beyond.

Near the main entrance to the house the first object that attracts and holds the interest of the visitor is a magnificent hedge of *Fuchsia Riccartonii* about twelve feet high and half that in diameter, while many of the plants possess stems as thick as one's wrist. Near by is another magnificent hedge of *Escallonia macrantha*, flourishing as only this plant does in such favoured localities. The walls of Bosahan are clothed with a fine assortment of rambling plants, and we were particularly interested in wonderful examples of *Cassia corymbosa*, *Bougainvillea glabra*, *Sollya heterophylla*, *Tibouchina macrantha*, *Solanum jasminoides*, *Lageria rosea* and *Benthamia fragifera* that were all in perfect health on the wall facing south. On the south-west front we were interested to find a fine specimen of *Rose Mme. Lambard* that

had attained a height of 30 feet, and which at the time of our visit (early April) was in full flower. *Cestrum purpurea*, *Lonicera Hildebrandtii* and a fine *Pittosporum* were other plants that called for special mention on this wall.

The Fern and Goodah Glens.—To the visitor from less favoured localities the Tree Ferns at Bosahan are one of the most interesting features. These are grown in two charming glens, through the whole course of which a gentle stream of crystal water wends its musical way to the sea. The trees in these glens are mostly tall Oaks with moss-grown stems, which stand like sentinels

over the host of choice Rhododendrons, Bamboos, Dracænas and scores of *Chamærops excelsa*. These, in the partly subdued light, impart quite a subtropical appearance to the glens, while ever and anon the visitor comes face to face with magnificent colonies of Tree Ferns. Bordering the sea and leading from one glen into another of similar size is a charming woodland walk, overhung by Hazel boughs and Hawthorn, and studded on each side with Narcissi and Primroses, planted first of all with a lavish hand by man and subsequently in riotous profusion by Nature. This second glen, which leads the visitor back towards the mansion, is in many ways a replica of the first, except that more water is present, thus enabling some very fine grouping of Japanese Irises to be carried out. Bamboos, Palms and Tree Ferns abound on every hand, and the accompanying illustration, from a photograph taken in this glen, will give our readers some slight idea of the dimensions that the Tree Ferns attain.

Leaving this second glen and travelling towards the mansion, the visitor passes along an avenue of Palms to the Lapageria walk, where these plants, both white and red flowered forms, fling their slender shoots in great profusion over trellis and pergola, constructed of home-grown Bamboos, while, near by, Clematis indivisa, with its myriads of dainty white flowers, may be seen scrambling over the branches of tall trees situated near by. On a wall that extends from the Lapageria walk we were pleased to notice *Abutilon megapotamicum* in flower, and Mr. Chapell, the head-gardener, informed us that it had bloomed all the winter, as had a magnificent specimen of *Gianthus Dampieri*, the first bloom of which opened on November 26.

In still closer proximity to the house is a spacious, sloping lawn, in the beds of which a wonderful collection of rare trees and shrubs finds a home. A few of the more interesting of these at the time of our visit were *Drimys Winteri*, a beautiful seedling *Acacia*, *Plagianthus velutinus* (which had made a fine tree and flowered freely the previous year), *Clethra arborea*, a magnificent plant of *Rhododendron ferrugineum*, the Loquat (*Eriobotrya japonica*), a fine tree of *Embothrium coccineum*, *Pittosporum speciosum* (with dark green foliage that has beautiful silvery tomentum on the under surface and flowers of deep blood red), *Brachyglottis repanda*, a fine plant of *Feijoa sellowiana*, *Magnolia Campbellii* (which blooms here), *Eucalyptus globulus* (over 70 feet high) and *Drimys aromatica*. *Rhododendron Nuttallii* blossoms in the open here. By the margins of a natural-looking pool situated in this lawn Royal Ferns, Gunneras and numerous other moisture-loving plants flourish in abundance, imparting to the whole an air of tranquillity that is too often missing in otherwise excellent gardens.

A great deal more might be said about the treasures to be found in the gardens and glens at Bosahan, but enough has been mentioned to indicate what a vast amount of enjoyment awaits the plant-lover who is fortunate enough to visit this most delectable spot in a far-off and too-

little-known corner of England. Before closing, we would express our thanks to Sir Arthur Vivian for allowing us to see his many treasures and to place particulars of a few, at least, of them before our readers. Our thanks are also due to the steward, Mr. Cranford, who went to Bosahan when Sir Arthur built the house; and to the head-gardener, Mr. Chapell, for their courtesy so freely extended to us.

THE ORIENTAL POPPIES.

THE large-flowered herbaceous plants known under the general name of Oriental Poppies form one of the brightest and most interesting features of our borders and large lawn beds during the month of June, the floral display sometimes being prolonged well into July. The old scarlet flower, with its boss of black anthers, has for many

CROCUS SUSIANUS.

ALTHOUGH not a flower that everyone would care to grow, this charming little *Crocus* is a great favourite with many. It is frequently referred to as Cloth of Gold, but it is necessary to see its flowers fully opened to recognise it by this name. To the writer the blossoms of this *Crocus* are most pleasing before they open wide, *i.e.*, just as they push up from the rather inconspicuous tuft of delicate green leaves. When in this condition the beautiful markings on the outsides of the floral segments are seen to the best advantage. These take the form of perpendicular blotches of deep glossy bronze maroon, one to each segment, and between these blotches the orange yellow basal colour shows itself in a most attractive manner. This little *Crocus* is a native of the



TREE FERNS GROWING IN THE OPEN IN THE GARDENS AT BOSAHAN, CORNWALL

years been a familiar plant to us all; but during the last decade a number of other varieties, differing chiefly in the colour of their blossoms, have been raised and put into commerce. Unfortunately, some of these are not good garden plants, inasmuch as their flowers lack that clearness of colour that is essential in plants suitable for adding beauty to the outdoor garden. One of the best of the new-comers is Jeannie Mawson. This has large, bold flowers of rich salmon pink tint, with purple blotches at the bases of the petals. Cerise Beauty, as its name implies, is coloured cerise pink, and is a most attractive flower when well grown. In Princess Ena we have a light orange salmon Poppy of great charm, and one that is delightful as a cut flower. In common with other members of the family, the Oriental Poppies should be cut just when the buds are bursting. They will then open freely in water and reveal to the fullest extent the delicate beauty of the crimped petals.

Crimea, and although it has been known in this country for a long time, it does not appear to have made any great headway in popular favour. It opens its blossoms during the early part of February, and this year one plant in my garden was flowering before January had departed. It is one of the best *Crocuses* for planting in grass, but, like all of its kin, it should be given a sunny position. Grown in shallow pans or pots in a cold frame or a quite cool greenhouse, it is a charming little plant for indoor decoration, where its rather delicate beauty can be developed to the full without fear of injury by birds or ungenial weather. In common with most, if not all, other *Crocuses*, it will not stand hard forcing; it should be allowed to develop under as natural and cool conditions as possible. Corn can be purchased very cheaply, and it is not yet too late to plant, though the earlier they are put in the better.

ROSE-GROWING IN TOWN GARDENS.

GOOD red Roses are always welcome, and most town gardeners are glad of an opportunity to add to their collections. Really fine novelties of this colouring are certainly scarce among the Hybrid Teas, and we must still look to the future for perfection. Of recent introductions the majority have been bedding Roses, and, of these, one of the best is Mrs. Edward Powell. In colour it is described as scarlet, shaded with purplish crimson, but this description hardly does it justice, for the crimson predominates and the shade is entirely pleasing, which means that the purple is scarcely perceptible. Growth and habit are both excellent, but perhaps the finest feature of this Rose is its beautiful foliage, of a rich reddish brown in the new growth, changing to a deep bronzy green as it hardens. It is affected hardly at all by mildew, and, being very free flowering, the variety is one that may be confidently recommended for towns.

From the Rose-grower's point of view, the present season has been chiefly remarkable for its several prolonged periods of dryness. One effect of this has been to bring out in many kinds the good points which are only suspected in a more humid season. Roses such as the Cochetts and Mme. Constant Soupert, which are naturally bad openers, have given no trouble at all, while even Souvenir de Pierre Notting, worst of all good Roses in this respect, has expanded quite freely almost throughout the season. If dry weather benefits some Roses, there are many that it affects adversely. Kinds which are described as good in a cool season, it may safely be assumed, will not show to great advantage when conditions are the reverse. Captain Hayward, Frau Karl Druschki and Lady Ashtown, to mention only three, are among those likely to suffer, while the kinds with but few rows of petals, such as Mme. Melanie Soupert and Betty, are so soon over that their full beauty can hardly be seen.

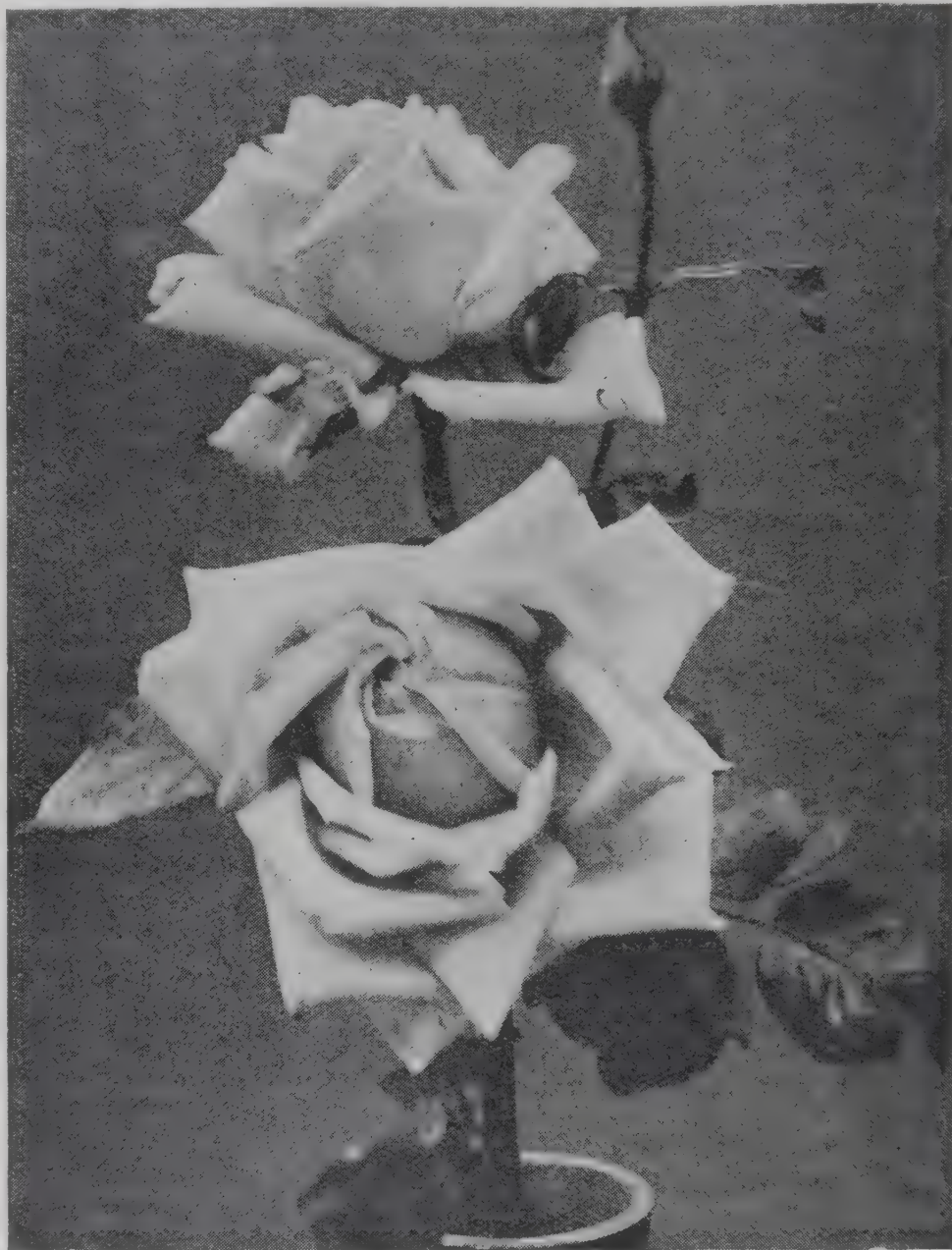
A propos of thin Roses, there are now many beautiful singles which are rightly appreciated both for their effect in the garden and for decoration indoors. Of the "Irish" family, one cannot but think that Irish Elegance still retains first place. Irish Fireflame does not appear to find the English climate as favourable as that of its native land. As to whether these kinds are suitable for town gardens is a question which depends greatly upon the space at one's disposal. To be seen at its best, Irish Elegance needs to be massed in a bed of fair size. It is a large grower, and this, as well as the delicacy of its colouring, make it difficult to group with other Roses; but

those who can spare the room should certainly have a bed of it, even if it consists of only half a dozen plants.

Red-Letter Day, another of Messrs. Alex. Dickson and Sons' productions, is one of the most beautiful and conspicuous semi-double Roses, and shows to great advantage even in a small group of plants, the colour being a particularly warm shade of scarlet crimson. P. L. GODDARD.

ROSE NERISSA.

THIS charming Hybrid Tea Rose was raised by Messrs. William Paul and Sons of Waltham Cross, and when first shown by them in 1911 was promptly noted as a superb addition to Roses of creamy



ROSE NERISSA, A BEAUTIFUL CREAMY YELLOW HYBRID TEA.

yellow tint. Since then I have been able to test it and in that way prove its capabilities, especially as a garden variety. It has a vigorous habit, and the exquisitely shaped flowers are borne on long, stout stems; hence it is particularly valuable for cutting. The exhibitor will find it a most useful variety, as the blooms, in addition to their perfect shape, always possess plenty of fulness and substance. When shown before the Royal Horticultural Society on July 18, 1911, this Rose received an award of merit, a distinction that was undoubtedly well deserved. The accompanying illustration gives a good idea of the superb shape and fulness of the flowers, though it cannot convey the refinement that is so characteristic of this variety.

SEASONABLE NOTES ON VEGETABLES.

Asparagus.—As the tops are now thoroughly ripened, they should be cut off within 2 inches of the soil. Clear the beds of weeds, lightly fork or hoe over the surface, and cover the beds to a depth of 2 inches with half-decayed farmyard manure. If the beds are to be made extra tidy, cover the manure with a thin layer of soil from the alleys between the beds, chopping down the sides neatly. If strong crowns are available, the roots may be lifted and forced for an early supply. A hot-bed in a pit or cold frame is a suitable site. Collect the necessary material—long, strawy manure from the stable, Oak and Beech leaves—and throw it into a heap to induce it to ferment, when the bed can be made on which the frame is to stand. Note the temperature in the frame, and when it declines to about 65° the soil and roots should be put in. Three inches of compost—old potting soil, leaf-mould and finely sifted horse-manure—will suffice. A thickness of 3 inches under the roots and 2 inches over them when placed in position as near together as possible, without being overcrowded, will answer well. Keep the frame close until growth commences; then give a little air. Syringe the soil twice daily with tepid water. Maintain a temperature in the frame of 60° by the aid of outside linings of fresh manure and covering the glass with mats.

Lettuce.—Continue to prick out small plants in frames for future use, covering the soil with coal-ashes to prevent slugs devouring the plants. When these are established, give abundance of air to induce sturdy growth, removing the lights entirely when the weather is favourable. When there is a danger of the supply outside running short, remove a batch of plants to a frame, as there they will grow more quickly.

Celery.—The last earthing of the latest crop should be completed without delay, sloping the soil on each side of the rows sharply to prevent heavy rains getting down to the hearts of the

plants in quantity, as in the case of heavy soil an excess of moisture is harmful. A supply of litter, straw or Bracken should be at hand for covering the rows in case of severe frost setting in.

Tomatoes.—Young plants intended for fruiting during February or March next year should be kept near the glass in a buoyant atmosphere and a temperature of not less than 60°. Those plants with fruit now ripening should have a light position near the glass in a temperature of not less than 65°, with a rather dry atmosphere.

Autumn-Sown Onions are looking remarkably well. The seed germinated satisfactorily, and now there is an abundant supply of green Onions suitable for salads, in addition to the quantity required for the usual crop. Keep the plants

tree from weeds, so that the growth from now onwards will be of a stocky character.

Cauliflowers of the Autumn Giant or Self-Protecting type not sufficiently advanced for cutting should be lifted and heeled in in cold frames or at the foot of a south wall, where they can easily be protected in the case of sharp frost. Plants intended for putting out early next year should be potted singly in 3-inch pots and plunged in coal-ashes in a cold frame, drawing off the lights as the weather permits to encourage sturdy growth.

Mushrooms.—Continue to prepare the manure for additional beds by frequent turning, so as to let off surplus steam and heat. Spawn earlier-made beds as soon as the temperature declines to 75°, using pieces of spawn 2 inches square every 9 inches

A ROSEMARY FOR THE ROCK GARDEN.

EVEN during its brightest periods the rock garden owes something to the dwarf-growing shrubs which are usually planted between the large boulders, and during the winter and late summer months such shrubs relieve to a great extent the bareness that is frequently associated with the rock garden at those seasons. A charming little shrub for this purpose, and one that does not seem to be at all well known, is the dwarf form of the common Rosemary known as *Rosmarinus prostrata*. This has the old-world fragrance that renders the taller-growing kind

or it might with advantage be planted by a doorstep where the tall-growing kind cannot be accommodated. Sweet-smelling shrubs are none too plentiful, and we ought to make the fullest use of those which are available.

THE SUNK GARDEN AT SUTTON PLACE.

No doubt the sixteenth century gardens of Sutton Place, Surrey, were furnished with a richness which matched the splendid architecture of the house, but few traces of them were visible when Lord Northcliffe made it his home. It fell to



THE NEW SUNK GARDEN AT SUTTON PLACE, SURREY.

apart, burying the spawn in the bed about two inches deep. Sprinkle over the surface of the bed a small quantity of prepared manure, finally ramming the whole down firmly with a brick. Soiling should not be done for a few days after spawning. The soil being in a moist state, it is easily smoothed over and made firm with the back of a spade. Finally cover the bed with litter to prevent the soil drying too rapidly.

Cardoons.—The latest batch of plants should be prepared for blanching, as growth is now almost completed. Wrap around each stem a piece of brown paper 6 inches wide, covering this with a hay-band tightly woven around, and finally bank up with soil

See more.

E. MOLYNEUX

so delightful, and, indeed, only differs from it in habit and somewhat smaller foliage. Instead of forming the columnar bushes that we so often see in old-fashioned cottage gardens, the prostrate variety keeps close to Mother Earth, and at all seasons is a source of satisfaction to its owner. In late spring, when lavishly bedecked with its quaint lavender blue flowers, this little shrub is second to none. It should be given a rather warm position and porous soil, yet it ought not to be so placed that it will suffer from drought during the scorching days of summer. If these points are borne in mind, it is not more difficult to grow than the tall Rosemary, and need not be confined to the rock garden. For instance, as an edging to the herb garden it would be delightful

Lady Northcliffe to employ her charming taste in recreating a fitting garden frame for the Tudor building. To the west of the office quadrangle there remained the old walled gardens. An octagonal summer-house stood at their northern intersection. It is probably the oldest garden feature remaining at Sutton, and is seen in the accompanying picture, which also shows a modern shelter designed on the same lines. The enclosure has been laid out with delightful effect. A square panel has been sunk, and its dry retaining walls are gay with alpine. In the middle is a round pool, its margin planted with *Iris Kämpferi* and other water-loving things. Sheltered beneath the walls are broad herbaceous borders filled with tall-growing plant

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Fruit Trees in Pots which are still in the open should be placed in a bed of ashes and plunged to the rims of the pots as a protection from frost, and a further covering of leaves should afterwards be placed over the surface when sharp frost sets in. If American blight is present on the Apple trees, they may be carefully dressed with some approved preparation while the trees are dormant. Peach and Nectarine trees in pots which are intended for succession should now be placed under cover and the ventilators left open during mild weather.

Tomatoes.—A sowing ought to be made now to produce plants for spring fruiting. As soon as the young plants are well through the surface they should be placed quite close to the roof glass in a temperature of 60°. Pot into small, clean pots as soon as large enough. Endeavour to grow the plants as stocky and short-jointed as possible. Plants from which fruits are being gathered must be carefully watered throughout the winter months, and ventilation given when external conditions permit.

Plants Under Glass.

Plumbago rosea.—This charming winter-flowering plant succeeds best when allowed to remain through the flowering period in a warm conservatory or intermediate stove where the atmosphere is somewhat dry and where a little air can be admitted when the weather is favourable. If choice flowers are in demand, a very pleasing effect may be produced by associating *Plumbago rosea* with *Lily of the Valley*, *Roman Hyacinths* and good fronds of *Adiantum*.

Freesias.—As soon as the plants are a few inches high, they should be removed from the cold pit to a warm greenhouse and placed near the glass. At this stage a few twigs ought to be placed in position to afford the necessary support. When the pots are well filled with roots, weak manure-water may be applied with advantage.

Sweet Violets.—Now that the plants have become well rooted in the new soil, it is hardly possible to give too much air, providing the weather is mild. At Frogmore the lights are removed every morning and only partly closed at night until sharp frost sets in. Remove all decaying foliage and see that the roots are well supplied with clear soft water.

The Flower Garden.

Lifting Chrysanthemums.—Now that the flowering season is over, a sufficient number of healthy roots should be lifted and placed in a cold frame with a view to producing cuttings for next season's stock. By the end of January plenty of stocky cuttings will be available for propagation.

Herbaceous Borders which have recently been planted should be lightly pricked over as soon as possible, taking care not to disturb any of the newly planted subjects. A careful watch must be kept for slugs, which will soon work havoc if not destroyed. Borders where lifting and dividing are unnecessary should be carefully cut over and a dressing of decayed horse-manure or leaf-soil lightly forked in among the plants. Any strong-growing subjects which have grown beyond bounds may be lifted and replanted with a view to bringing them more in keeping with their surroundings.

The Hardy Fruit Garden.

Strawberries.—Autumn-planted Strawberry quarters will require a light forking over, but previous to this the weeds should be removed, and if the ground is dry enough, this ought to be carefully trodden round the plants. Plants in older beds which are intended to fruit another season must be carefully trimmed up and all weeds and decaying foliage removed. Fork the surface very lightly, and if necessary give a light dressing of decayed manure, to be washed into the soil during the winter.

Raspberries.—November is the best month to make new plantations of Raspberries. Let

the soil be trenched 2 feet deep and enriched with good farmyard manure. To obtain the best results it is necessary to make new plantations every five or six years, and, in selecting the suckers for these, those produced by old, worn-out plants should be avoided. It is better practice to obtain a fresh stock from the nursery than to plant suckers which have been grown on the same place too long. As regards the method of planting, the space between the rows ought to be at least 6 feet, and if double this distance so much the better, as low-growing vegetables may be planted between, and the crop will be much heavier and the fruits larger in consequence of a free circulation of light and air among the plants.

The Kitchen Garden.

Seakale Forcing.—As soon as the foliage has died down, a few roots may be taken up and placed in some dark chamber with sufficient heat to start them into growth. If only a small supply is necessary, the Mushroom-house is a good place to grow it. If large pots are available, the roots should be placed in good rich soil to within an inch of the crown, and this made firm with the fingers. Each pot ought to contain sufficient roots to supply a dish of Seakale, and the pot may be kept in perfect darkness by another of the same size being turned upside down and covered with clean leaves to exclude both light and air. A temperature of 60° will be quite high enough for the purpose. One good watering should be sufficient, providing the surroundings are kept moist.

French Beans in Pots should be freely supplied with manure-water. Keep the plants well exposed to the light, and provide sufficient sticks to keep the plants in an upright position. At night 60° will be a suitable temperature for them.

Mint and Tarragon.—As soon as the foliage has died down, a number of plants ought to be lifted and placed over a gentle hot-bed in order to produce green shoots for the daily supply. The hot-bed should be trodden tightly and a covering of sifted soil placed over the surface. The roots must then be put in position and covered with 2 inches of fine leaf-soil. Water should then be applied at a temperature of 70°.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Turnips.—Any late-sown Turnips still in the ground should now be lifted and stored in sand. Larger quantities will keep well enough in pits similar to those used for Potatoes. It should be remembered that they will keep much longer if the leaves are broken off and not cut, as is usually done. They had better be stored where they can be easily got at in rough weather.

Carrots in Frames.—Where the forcing of these is intended, preparations must now be made with that end in view. At the outset it should be pointed out that this is a vegetable that will not respond readily to undue forcing. If artificial heat is not available, the frames ought to be protected by hot-bed material, and as the roots will be used when quite small, the frames may be made up almost entirely of sand. From this date a small sowing should be made every three weeks, which in most cases meets the demand.

Broad Beans.—In view of the fact that this crop takes a long time to come to maturity, it is doubtful if the seeds in the majority of cases are sown early enough. I have always advocated the sowing of this crop in the autumn, even among farmers, and, provided a certain amount of growth is made before the end of the year, there is very little danger of the crop being affected by frost. Sowings made now should be on a warm border, if possible sheltered from the north, and if planted close enough, it is surprising what a useful crop may be secured quite early in the season.

The Flower Garden.

Moss on Lawns.—Should the weather be favourable, opportunity ought to be taken to get rid of moss patches on the lawn, which at this season of the year are very conspicuous. For this work a good sharp-toothed rake should be used,

going over the lawn several times. Afterwards have the moss swept off. In most cases the presence of moss is a sure sign of poverty, so that in top-dressing it will be advisable to mix some approved lawn manure with the compost. The compost must be spread evenly over the surface and allowed to remain thus until the spring, when a further dressing may be given; then have the lawn rolled.

Border Carnations.—Now that severe weather may be expected, extra care should be taken to see that these Carnations are safely guarded against rabbits and other pests. Where it is not possible to use wire-netting, I may repeat the advice I gave in the spring; that is, to stretch pieces of string round them about six inches from the ground, and paint the string with Renardine about every three weeks. The possibilities are that no further trouble need be feared. This preparation can be had from Messrs. Gilbertson and Page, Limited, Hertford.

Herbaceous Plants.—As already pointed out, the work of replanting some of the earlier-flowering subjects should not be delayed, provided, of course, the weather will permit of planting being done. While quite a large number of herbaceous plants may be moved about freely, there are others which suffer more or less from disturbance. These include Anemones, Tritomas, Lathyrus and many others of a similar nature, and, provided the soil is fairly good, they need not be disturbed more than once in four or five years.

Plants Under Glass.

Forcing Plants.—Quite a number of flowering plants may now be introduced into a heated pit and brought on gradually. These will include Azaleas, *Deutzia gracilis* and *Spiræas*, which are indispensable even in the most modest collection. Except in the case of *Spiræas*, very little water will be required at this stage; a slight syringing will suffice for a time. *Lily of the Valley* clumps lifted from the open border may be placed in boxes, which will supply useful flowers for cutting. These last somewhat longer in a cut state than those from retarded crowns. *Roman Hyacinths* should be brought on in small batches to keep up a continuous supply.

Chrysanthemums.—As the single-stemmed varieties are cut over, the plants ought to be stood where they will be secure from frost. Place them where they will be exposed to the light, so that good, healthy cuttings will result. Very often the plants are allowed to lie about in odd corners, with the result that cuttings are worse than useless. Plants that are shy in producing young growths should be placed in a little heat and carefully watered.

Cypripediums.—A number of the varieties will now be showing flowers, and although many of them are very erect in habit, others, again, will be seen to better advantage if they are staked up. Owing to the nature of the potting material, this work must be very carefully performed, otherwise much injury will be done to the tender roots. Very light stakes or Bamboo tips dipped in green paint should be used, and these ought to be so arranged as not to detract from the beauty of the flowers.

Liliums.—Many of the bulbs will soon be coming to hand, and it is important that these should be potted up almost immediately they are received. For ordinary purposes three bulbs in a 7-inch pot will be sufficient, and, in potting, place the bulbs so that ample room is left for top-dressing. These pots ought to be stood in frames and the plants brought on as required.

Fruit Under Glass.

Pot Vines.—Those intended to produce ripe Grapes early in May must now be placed in the forcing-house. The pots should be plunged in hot-bed material made up of Oak leaves and short litter. On no account must this bottom-heat be allowed to become excessive at any time, and, until the Vines start into growth, the temperature should not exceed 50°. The atmosphere ought to be kept fairly moist and the roots syringed with tepid water on all favourable occasions until growth commences. Water must be given with care, as it will be some weeks before root action is very active.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

(Continued from page 558.)

DANDELION (*TARAXACUM OFFICINALE*, L.).

DANDELION has been scarce throughout 1914. English roots have usually been sold in competition with German roots at about 40s. per cwt., but 110s. was being paid in September. In the early part of this year fresh root was worth 6s. per cwt. Unless this year's collection is much greater than usual, the absence of German competition will keep prices high. Farmers might collect and dry the roots, or arrange with a middleman for this to be done for them. An advantage of this course is that the weed is reduced.

Cultivation.—About 4lb. of seeds per acre are drilled in rows a foot apart. Hoeing is needed to keep the crop clean. Flower-heads are picked off as they appear, before the winged seeds can be dispersed, otherwise the grower's own land and that of his neighbours will be smothered with the weed. The roots are dug the second year in autumn. They may be transported fresh for pressing out the juice or making dandelion extract, or be washed, sliced and dried. The yield should be 4 tons or 5 tons of fresh roots to the acre in the second year. A hundred parts of fresh root yield twenty-two parts of dry material.

FOXGLOVE (*DIGITALIS PURPUREA*, L.).

The Continental supplies of *Digitalis* leaves from Thuringia and the Harz Mountains are stopped, but there should be enough of the wild plant in England to satisfy home requirements if it can be collected. Dry wild leaves would be worth 35s. per cwt. and upwards. Unless these are gathered in considerable quantity, there will be a shortage next year.

The Foxglove is cultivated by a few growers in this country for a very limited market, in order to provide a drug of more uniform activity from a true type of *Digitalis purpurea*. *Digitalis* is cultivated in the partial shade of orchards, but it likes a moderate amount of sun. Its cultivation as a paying proposition to a fruit-grower can hardly be recommended. Its culture is that of a garden plant. *Digitalis* grows best in a well-drained, loose soil rich in leaf-mould. It is said to dislike chalk, but appears to grow well enough at Croydon and Darenth on calcareous soils. About 2lb. of seed are required per acre, and as the seeds are so small and light, they should be mixed with fine sand in order to ensure even distribution. They should be thinly covered with soil. The seeds are uncertain in germination.

The leaves are hand picked in the second year from flowering plants, the yield being about 1 ton to 2 tons of fresh leaves per acre. Great care is necessary in collecting and drying quickly, and a reputation for care is necessary if the crop is to be sold at remunerative prices.

DILL (*PEUCEDANUM GRAVEOLENS*, B. AND H.).

English Dill has long had a reputation of its own for distillation of essential oil. It is grown chiefly in East Anglia. Considerable shortage is already evident, following the stoppage of Continental supplies, the cheap Indian fruit not being an effective substitute. This annual is easily grown, and should pay well in years to come.

Cultivation is similar to that of spring Oats, 10lb. of seed being drilled to the acre. Careful attention must be given to the destruction of weeds. The plants require much watching as the time for harvesting approaches. Mowing is begun as the lower "seeds" (fruits) begin to fall, the others ripening on the straw. In dry periods cutting is best done in early morning or late evening. The loose sheaves are built into small stacks of about twenty sheaves tied together. In hot weather threshing may be done in the field. The crop is considered rather exhaustive of soil fertility. The yield is 5cwt. to 7cwt. of Dill fruits per acre, selling in normal periods at 30s. to 40s. per cwt.

(To be continued.)

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

TROUBLESOME WEED IN LAWN (*E. T. W.*).—The weed sent for name is the Self-heal, *Prunella vulgaris*. It is most common in badly drained ground, but is a common weed in many lawns. The best way to destroy it is to rake out as much of it as possible; then give the lawn a generous surface-dressing of farmyard manure, basic slag or bone-meal. Either of these will encourage the grass, and by its extra vigour it will then displace the weed.

ADVICE ON YUCCAS (*E. F. Brown*).—We advise you to plant the Yuccas in a sheltered, well-drained part of the garden. It is not necessary to put them under cover in the winter. As the leaves are quite healthy, they must be able to obtain a certain amount of nourishment, even though most of the woody matter has perished. In planting, the Yuccas should be put at such a depth that the decayed portion is below the surface of the soil. Then roots will in time be pushed out from the healthy part, and the plants again become established. Where the woody matter of the stems is decayed, it cannot be replaced; but when roots are produced from the healthy portion, the decay will not spread upward.

HERBACEOUS PLANTS AND BULBS (*M. B.*).—As the lawn appears to come right up to the hedge, it would be necessary to form a border of any width you please or to suit the circumstances of the case, and this, if properly trenched and manured, might be made to grow many things quite well. As the hedge is new, you have nothing to fear from the spread of roots, though it would be well in planting to keep at some distance, say 2 feet, from the stems of the plants. If you will give us the width and length of the border, we will endeavour to suggest something of service. You might say whether annuals or perennials would be preferred. Darwin Tulips should be planted 5 inches or 6 inches deep. Daffodils, if for purposes of naturalisation, would do quite well 4 inches deep, the larger-rooted sorts, as Emperor and others, being planted 6 inches deep. For small bulbs, as Snowdrop, Chionodoxa and Muscari, 4 inches deep would be ample, somewhat less if the soil is of a heavy nature. Rough ground will do quite well for many of these plants, though better results will be forthcoming if it is well trenched or even deeply dug prior to the planting.

DAFFODILS NOT DOING WELL (*D. F. R.*).—From your description of the bulbs it would appear they have fallen a prey to the fungus disease known as *Fusarium bulbigenum*, which during the past few years has been giving trouble to cultivators both in Holland and England. There is no cure, and at present no known preventive. All you can do is to burn the bulbs. You might also, with a view to limiting its spread, mark the places of any groups of bulbs bearing signs of leaf disease for early lifting and examination, and as a precautionary measure dust with sulphur, though as the fungus appears to permeate the inner tissues of the bulb, this is not likely to prove very effective. As to the soil whence the diseased bulbs came, we should certainly avoid it for Daffodils, and give it a good dressing of finely powdered lime in addition. In this way the soil should be of service in growing Montbretias and other bulbous-rooted plants. The only way to avoid "more rotting" or to limit its spread is by annual lifting, drying and cleaning. Lift the bulbs in July, and having dried them in an airy shed in shallow, open trays, keep them under observation and burn all affected bulbs at once.

PLANTS FOR BORDER (*Flora*).—You will find the following of service both for the border and for cutting. A 3-foot-wide border will not admit of more than two rows of plants, which should be arranged alternately to afford them as much room as possible. As the fence is low and no trees exist, it will be possible to keep the back line quite near the fence, the plants being set 2 feet apart. Those in the front row should be 18 inches apart. For the back row: *Aster ericoides* Desiro (white), *A. Novi-Belgii* densus (blue), *Anemone japonica* alba, *A. j. elegans*, *A. Amellus* Riverslea (violet), *Phlox* Mrs. E. H. Jenkins

(white), *P. Flambeau* (scarlet), *P. Le Mahdi* (violet), *Pyrethrum Hamlet* (pink), *P. James Kelway* (crimson), *P. Ne Plus Ultra* (blush), *Lilium candidum* (white—three or six bulbs should be set in a group), *Delphinium Belladonna* (clear blue), *D. King of Delphiniums* (dark blue), *Iris* Mrs. C. Darwin, *I. Mme. Chereau*, *I. pallida* and *Gaillardia grandiflora*. For the front row: *Aster levigatus* (rose), *Helenium pumilum* (yellow), *Lilium pyrenaicum* (yellow), *L. umbellatum* (orange), *Pentstemon Newbury* Gem (scarlet), *Coreopsis lanceolata* (golden), *Campanula glomerata dahurica* (dark blue), *Achillea alpina* (white), *Aster subcaruleus* (blue), *Heuchera sanguinea* (scarlet), *H. brizoides* (rosy), *Hemerocallis Dumortieri* (orange), *Geum Heldreichii* (orange yellow), *Geranium Endressii* (rose), *Gentiana acaulis* (deep blue), *Dicentra eximia* (rosy), *Campanula carpatica* (blue), *C. c. alba* (white), *C. c. Riverslea* (dark blue), *C. muralis* (blue), *C. G. F. Wilson*, *Aubrietia* Dr. Mules (violet), *A. Fire King* and *Anemone sylvestris* (white).

PLANTING HERBACEOUS BORDERS (*S. D. P.*).—If the failure to which you refer concerns the past season more particularly, we should consider it to be due to the long-continued drought, or it might be this in conjunction with undue preparation of the borders. All hot, sandy soils require specially deep working and enriching with manure, and with cow-manure, by reason of its cooling nature, for preference. With some knowledge of the soil of your district, we know also the difficulty of inducing the usual run of vigorous-growing herbaceous plants to thrive, and we know, too, that in many instances this year such plants have been more or less burnt up. With due preparation of the soil in such a case, annual replanting in the autumn should also be indulged in, so that the plants may obtain a good hold of the soil. In addition, a good lime dressing during the process of soil preparation would be helpful. A greater success, too, may be ensured in those instances where the borders are quite removed from tree life, and when the surface soil is either kept flat or is below that of the surrounding soil. This would admit of an occasional flooding of water in times of great drought, when, with the assistance of some artificial manure, a fuller measure of success might be achieved. As you say the annuals have not done well—these have given excellent displays in most dry, gravelly soils this year—we can only conclude that soil poverty as much as drought has been at the root of the trouble. In all probability a little expert advice on the spot would be money well spent. Some of the more showy plants calculated to succeed with the treatment we have in mind would be the Italian Starworts in variety, *Campanula carpatica* in several varieties, also *Hendersonii* and *Hillside* Gem, *Stokesia*, *Anemone japonica* in variety, *Cimicifuga simplex*, a set of florists' *Pentstemons* to be planted in March or April, *Rudbeckia*, a selection of *Phloxes*, *Carnations* and *Michaelmas Daisies* in variety should also provide what you require. Among annuals, *Godetia*, *Rocket*, *Larkspur*, *Lavatera*, *Alonsoa*, *Nigella*, *Snapdragons* and *Stocks*. So far as selection goes, we can only generalise, as you do not give the size of the borders. The partial failure of the Lupines is due probably to the same cause.

TREES AND SHRUBS.

PLANTS FOR SCREEN (*M. L. W.*).—You cannot do better than plant common Holly in the position you describe. Plants 5 feet to 7 feet high can be procured, but they had better not be obtained before the end of April, as they do not transplant well during late autumn and winter.

TO KILL TREE STUMP (*E. F. Brown*).—The stump of a tree can be killed by exposing the principal roots and boring holes well into the middle of each root, afterwards filling the holes with salt. A more rapid method is to water the ground round about with weed-killer, but it poisons the soil and makes it unfit for other vegetation for a considerable time. You can obtain information about stocks for fruit trees in "Fruit Growing for Beginners," by F. W. Harvey, published by *Country Life*, Limited, 20, Tavistock Street, Covent Garden, W.C., price 1s., or post free 1s. 3d. A shilling book on "Trees and Shrubs," including methods of propagation, is published by Messrs. Cassell and Co., and is entitled "Pictorial Practical Tree and Shrub Culture." A more comprehensive book upon the same subject, entitled "Trees and Shrubs," by E. T. Cook, price 12s. 6d., is published by *Country Life*, Limited, as above.

ROSE GARDEN.

ROSES FOR NEW BED (*Chatenay*).—You should be able to make an effective bed of Roses in the plot of land described, providing you have the soil dug at least 2½ feet deep and plenty of good manure incorporated with the lower soil. We advise keeping the Roses at least 5 feet away from the Laurel hedge. The Roses can be planted as close as 18 inches apart, in order to have a good effect of colour. As you name Mme. Abel Chatenay, we suggest planting this at the end furthest from the windows, as it is a tall grower; then, to follow it, *Caroline Testout*, *Lady Ashtown* or *Betty*, with the *Monthly Rose* Mme. E. Resal in front. An alternative scheme would be *General Macarthur* (scarlet) at the back, Mme. Abel Chatenay next, with Mme. Ravary (golden) in front; or Mme. Abel Chatenay, Mme. Ravary, and the scarlet *Polyantha* Rose *Jessie* in front. All these are very free, continuous and inexpensive. Any of our Rose advertisers would supply these. The plants may be heeled in in the kitchen garden soil for several weeks until such time as you can plant them. If you could give us the exact width and length, we would advise you how many plants to procure.

MISCELLANEOUS.

USE OF SULPHATE OF POTASH (D. G.).—Sulphate of potash is not injurious to any plants as long as you do not use more than half an ounce to 2oz. to the square yard, but is, on the contrary, likely to be very beneficial on many soils.

NAMES OF PLANTS.—*Herbert Lester.*—The Dahlias sent were very poor and naturally out of colour in November. 2, Britannia; 4, Mrs. H. L. Brousson; 6, Phoebe; 94, too poor to recognise; 135, Mary Service.

NAMES OF FRUIT.—*R. Pope.*—1, Cellini Pippin; 2, Norfolk Beauffin. —*J. Wright.*—Beurée Hardy. —*Ribble.*—Durondeau. —*Lielie.*—1, Beurée Dumont; 2, Vicar of Winkfield; 3, Eister Beurée; 4, Northern Greening; 5, Blenheim Orange; 6, Kedleston Pippin; 7, Aston Town; 8, Durondeau. —*D. C. Lysaght.*—1, Very fine fruit of Blenheim Orange; 2, Lord Derby. The Pear was too decayed to identify.

SOCIETIES.

LIVERPOOL HORTICULTURAL ASSOCIATION.

THE executive of the above society, owing to the war, made their show into a non-competitive exhibition, with an open request that all fruits, plants and flowers might be sold and the proceeds given to the Relief Fund. The outcome was a generous one, the large Corn Exchange being well furnished on the 11th inst. with a varied assortment from well-kept gardens. Something novel was expected under the new regulation, where the exhibitor could adopt whatever system he desired and stage his exhibit at his own sweet will. The change was not very great. In some exhibits skill and taste created gratifying results, but in many cases overcrowding spoilt the effect. Although the show was non-competitive, honorary awards were made to the more important features in the form of gold and silver medals and certificates of merit. We can only notice briefly a few of the exhibits out of the seventy entries and those who were favourably accepted by the judges.

Gold medals were awarded to the following exhibitors: Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., Woolton, who made a brave show of fine Chrysanthemum blooms on a groundwork of Palms, Ferns, &c.; Mr. P. Counce, gardener to G. Nicholson, Esq., Prince's Park, Liverpool, who staged eleven vases of splendid single Chrysanthemums with about a dozen blooms in each vase—a highly meritorious exhibit; Mr. P. Jakeman, gardener to Sir W. B. Forwood, Bart., Bromborough Hall, who contributed five dozen Japanese blooms of splendid exhibition form; Messrs. Dickson and Robinson, Manchester, who set up an imposing bank of decorative varieties, showing great taste in arrangement; Mr. W. J. Lockett, Grassendale, who had a pleasing collection of Chrysanthemums and fruit; Frank Bibby, Esq., Shrewsbury, who had a similar stand with noteworthy fruit; Messrs. Stuart Low and Co., Bush Hill Park, Enfield, who had a pleasing combination of Roses and Carnations set up in pillar form on velvet—the Roses were charming for the season; Mr. J. Lee, Bebbington, who fully maintained his high prestige as a successful fruit-grower; and Messrs. R. P. Ker and Son, Aigburth, who added to the general effect with their fine stately Palms in considerable numbers.

Silver medals.—A large number staged the popular autumn flower, and excellent selections were set up by Mr. J. Stoney, gardener to Lieutenant-Colonel J. B. Gaskell, Woolton; Mr. J. George, gardener to T. Henshaw, Esq., Roby; Mr. H. Middlehurst, Liverpool; and Mr. Loo Thompson, Formby. Messrs. John Cowan and Co., Gateacre, were the sole representatives of Orchids. Fruit had numerous supporters. Mr. E. Bennett, gardener to J. E. Gordon, Esq., Chester; Mr. J. Gibbins, gardener to the Countess of Sefton, Croxteth; and Mr. Ben Ashton, gardener to the Earl of Lathom, were specially noteworthy with excellent collections. Mr. R. Manson, Gateacre, had bowls of bulbs, Palms, &c.; and Mr. C. A. Young, West Derby, Carnations staged on velvet.

Decorative tables were well shown by Messrs. Fishlock Brothers, Liverpool; Miss G. Milne, Waterloo; Miss Pollard, Liverpool; Miss Newsome, Ormskirk; and Mrs. Stephenson, assisted from her Liverpool roof garden.

Auction sales were held during the afternoon and evening, and these, with a small army of retail sellers, realised £110, which the executive hope to make a good addition to by the fruit unsold. Unfortunately, the weather was very bad, torrential rain falling nearly the whole of the day.

DULWICH CHRYSANTHEMUM SOCIETY.

THE twenty-first exhibition of this excellently managed society was a fitting celebration of its coming-of-age. Mr. R. B. Leech, the esteemed hon. secretary, takes a great interest in the work of this society, and is largely responsible for the introduction of several novel and pleasing features, which combine to make the show a great success. The exhibition is usually held at the Baths, Goose Green, but as the building had been commandeered for the Belgian refugees, St. Barnabas' Parish Hall, Dulwich Village, was utilised instead.

In front of the platform Mr. Leech, gardener to J. C. Eno, Esq., Wood Hall, Dulwich, S.E., set up a large, attractive group of Chrysanthemums and fine foliaged plants, which was much admired.

One of the chief competitive classes was a table group 8 feet by 4 feet, to comprise Chrysanthemums arranged

in vases, &c., and cut foliage and foliage plants, equal points being given for quality and effect. The judges placed Mr. A. Winter, The Gardens, Elm Lodge, College Road, Dulwich, S.E., first with a rather formal arrangement of very heavy blooms and beautiful foliage and foliage plants. A more artistic arrangement was set up by Mr. Leech, who had smaller blooms, but in several types the Chrysanthemum was charmingly displayed, with good foliage and foliage plants. This exhibit was placed second.

Another interesting class was for four varieties of Japanese, to be shown in vases, three blooms of one variety in each vase. A superb series placed Mr. J. Vanstone first, the varieties being Queen Mary, Lady Talbot, Mrs. Gilbert Drabble and F. S. Vallis. Mr. A. Winter was second, and Mr. T. Martin third.

Very handsome indeed were the four individual vases of decorative Chrysanthemums arranged for effect. A well-arranged vase placed Mr. L. Wheeler, The Gardens, Wood Hall, Dulwich, S.E., first. Another handsome vase from Mr. W. P. Barnes was placed second, and a good exhibit found Mr. T. W. Cliff third.

A competition that pleased us very much was that for two stands or vases of large blooms arranged with foliage for effect and with not more than eighteen large blooms in each stand, &c. This served to illustrate how monster blooms could be used in decorations. Two superb stands won first prize for Mr. R. B. Leech, who disposed his flowers and foliage most artistically. Second prize was awarded to Mr. Winter, who showed well, but less praiseworthy than that of the first prize exhibit. Bamboo stands were used.

One other class is worthy of notice. This was eleven Japanese blooms, distinct, to be shown on boards provided by the society. The boards were exceptionally large, and allowed 10 inches for each bloom, four blooms back and front, and three blooms in the middle row. Handsome blooms secured first prize for Mr. Winter, Queen Mary, Lady Talbot, Kara Dow, Bessie Godfrey and T. Lunt being his best blooms.

There were numerous other classes, all quite good, and we should think this society's exhibition is one of the most go-ahead of its kind.

The group of singles, as well as the group of large Japanese and other exhibition and decorative Chrysanthemums as shown by Mr. Norman Davis, were quite a feature of this splendid show. The singles were exceptionally good, and included such sorts as Juno (very large indeed), Isobel Felton, Mrs. W. Smith (white), Mensa, Joey Saunders, James Beats (bronze), Miss Molly Godfrey, Mary Morris and Thomas Ward.

Messrs. J. Peed and Son, West Norwood, also had a display of Chrysanthemums.

No prizes were awarded, and the whole of the proceeds, including the sales of flowers, &c., were to be given to the Prince of Wales' Fund. The society seemed sanguine of being able to raise about £60—a most commendable enterprise.

EDINBURGH CHRYSANTHEMUM SHOW.

THE annual Chrysanthemum show of the Scottish Horticultural Association was held in the Waverley Market, Edinburgh, on November 12, 13 and 14. It was originally fixed for a week later, and it was generally anticipated that the show would be cancelled on account of the war. The Council, however, decided to proceed with the show and to devote the profits to the Red Cross and Belgian Relief Funds. As was expected, the competition was more limited than usual, and the large hall not so well filled as in former years; but the display, as a whole, was a capital one, and the quality generally of a high class. Some of the ordinary exhibitors were noteworthy for their absence through various causes, but others who entered the lists exhibited in an admirable way.

In the competitive classes for Chrysanthemum blooms, the leading class was that for the City of Edinburgh Queen Victoria Memorial Prizes, the first being the City of Edinburgh Memorial Cup and £12 for a display of double and single Chrysanthemums on a table 12 feet by 8 feet. This worthily fell to Mr. James Beats, Binrock, Dundee, a well-known competitor elsewhere, but new to this show, who did credit to himself by his table, which contained splendid blooms admirably staged. Mr. D. McLean, Raith, Kirkcaldy, made a good second; Mr. G. Scott, Seathwood, Dundee, came third; and Mr. D. Kidd, Carberry Tower, fourth.

The Scottish Challenge Cup for ten vases of Japanese Chrysanthemums went to Mr. James Small, Norwood, Alloa; second, Mr. G. Stewart, Tulliehallan; third, Mr. H. M'Skimming, Auchinault, Helensburgh. Other prize-takers with cut flowers were Mr. J. Waldie, Mr. G. Stewart, Mr. J. Small, Mr. F. Templeton, Mr. G. Anderson, Mr. R. Whannell, Mr. A. W. Elliot and Mr. J. M'Fadyen. Messrs. Young and Co.'s challenge cup for a vase of Perpetual-flowering Carnations was won by Mr. W. Game, Dupplin Castle. The open class for six vases of Chrysanthemums had as the winners Messrs. Todd and Co.

Bouquets and floral designs were capitally shown, Mr. James Beats carrying off the leading prizes in the open classes. Mr. D. Kidd, Carberry Tower, was first for the decorated dinner-table; second, Mr. Beats; third, Mr. G. Scott, Seathwood. Chrysanthemum plants were good, Mr. M. G. Michie winning most of the first prizes. In the general plant classes there was, as a rule, a good competition, and the prizes were well distributed, Mr. J. Templeton, Mr. A. Cameron, Mr. A. A. Law, Mr. G. Scott, Mr. W. Brew, Mr. G. Anderson, Mr. J. J. Staward, Mr. F. M. Urquhart, Mr. W. G. Pirie and Mr. A. Williams being among the leading exhibitors.

Fruit was, as usual at this show, of high quality. Mr. D. Kidd was awarded the first prize for his collection of

eight dishes. The class for four bunches of Grapes, distinct, proved a win for Mr. J. Middleton, Callender House, Falkirk; and other first prizes for Grapes went to Mr. W. Hunter, Mr. A. Gauld, Mr. W. Scott, Mr. J. M'Fadyen, Mr. Middleton, and Mr. Kidd. The Malcolm Dunn Memorial Prize, for twelve dishes of Apples grown in Scotland, was won by Mr. James Duff, Threave, Castle Douglas, the same exhibitor being first for eighteen dishes of Apples. For six varieties of Pears grown in Scotland, Mr. R. G. Sinclair, Congalton, led. Mr. R. Currie, Foxley Hall, Hereford, was first in the open class for Pears.

Vegetables were a capital section, and many good exhibits were shown. Mr. W. P. Bell, Bothwell Castle, secured the first prize for the collection; second, Mr. W. Harper, Tulliebelton.

The trade exhibits, although few, were capital, and added considerably to the value and interest of the show. A gold medal was given to Messrs. W. Wells and Co., Merstham, for a notable exhibit of Chrysanthemums of various classes and Carnations, the varieties including a number of novelties. A gold medal was also awarded to Messrs. Storrie and Storrie, Carse of Gowrie Nurseries, for one of their extensive exhibits of fruit trees, fruit, flowers, &c. About a hundred and fifty varieties of Apples were shown on this table of about seventy feet long. Messrs. Dobbie and Co., Edinburgh, received a similar award for their magnificent collection of Potatoes, with good Chrysanthemums. Messrs. R. B. Laird, Dickson and Son, Edinburgh, were given a silver-gilt medal for a good display of conifers, &c. A silver medal was awarded to Messrs. John Forbes (Hawick), Limited, for an exhibit which included a number of Carnations, Begonias, &c. Messrs. Laing and Mather, Kelso, sent Potatoes and other vegetables, to which a bronze medal was given.

A splendid group of Orchids came from Mr. Hindle, Blacket Place, Edinburgh, whose gardener, Mr. W. Holden, grows them well, and a gold medal was awarded for this valuable non-competitive exhibit.

The show was opened by the Marchioness of Linlithgow.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE monthly meeting of this society was held at the Royal Horticultural Society's Hall on November 9, over which Mr. Charles H. Curtis presided. The sums of £28 17s. 9d., £13 0s. 4d. and £5 5s. 10d., respectively, were passed for payment to the nominees of three deceased members. The sick pay for the month on the ordinary side was £68 4s. 3d., on the State side £34 14s. 4d., and maternity claims amounted to £10 10s. The treasurer, in giving the financial statement, stated that the trustees had invested a further £400 on behalf of the society. The secretary reported that seventy-five members had joined His Majesty's Forces.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE fourth meeting of the winter session was held in the East Anglian Institute of Agriculture on Friday last. Mr. J. H. Hull occupied the chair, and about sixty members were present. Previous to the lecture the annual exhibition was held. There were ten classes, with a total of fifty-one entries. The competition was keen, and the exhibits reflected great credit on the exhibitors. In the fruit classes the judges had to award three extra prizes. Later in the evening the president, Mr. E. H. Christy, gave an interesting lecture on "Sweet Peas." The lecturer, who is an expert on this subject, gave some very useful hints, and explained in detail several important operations. At the conclusion of the discussion a hearty vote of thanks was accorded Mr. Christy.

WARGRAVE AND DISTRICT GARDENERS' ASSOCIATION.

A FORTNIGHTLY meeting of the above took place on Wednesday evening, November 4, when a very interesting paper on "Spring-flowering Bulbs Under Trees" was given by Mr. A. Rogers, of Messrs. Waterer, Sons and Crisp's Nurseries, Hare Hatch, Wargrave. He detailed such points as time of planting, preparation of the ground, methods of planting, and the best varieties to use. The following were among the various bulbs mentioned: Alliums, Anemones, Chionodoxas, Crocuses, Winter Aconites, Dog's-tooth Violets, Fritillaries, Snowdrops, Muscaris, Hyacinths, Scillas and Ornithogalums. A good discussion ensued and much useful information was imparted. A vote of thanks was accorded Mr. Rogers and carried with acclamation.

ROYAL HORTICULTURAL SOCIETY OF ABERDEEN.

THE annual meeting of this society was held the other evening. Parish Councillor Simpson, vice-chairman, occupied the chair. The annual report was submitted and approved of. It showed a credit balance of £27 1s. 10d. The chairman remarked that the membership was showing a falling off, and made an appeal to the members to endeavour to secure accessions to their number. The financial position of the society was still good, and the members had reason to be gratified with this. Mr. A. Robson, who seconded the adoption of the report, urged the desirability of adding to the reserve fund. On account of there having been no show held this autumn, it was resolved to continue the present office-bearers and directors. In room of Mr. A. M. Cocker, who has retired, Mr. James King, The Gardens, Balmagask, was appointed a director.

THE GARDEN.

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NOVEMBER 28, 1914.

NOTES OF THE WEEK.

National Dahlia Society's Annual Meeting.—The annual meeting of this society will be held on Monday next, the 30th inst., at the Hotel Windsor, Victoria Street, Westminster, at 4 p.m. It is hoped that as many members as possible will attend.

Roses in Yorkshire.—To meet the wishes of a number of our readers who cultivate Roses in Yorkshire and other Northern Counties, we have arranged with a well-known amateur grower to write three articles giving his actual experiences in Yorkshire. The first of these articles will appear next week, and the others in our issues dated December 12 and 19 respectively.

A Rare Yellow Rhododendron.—Although *Rhododendron campylocarpum*, a flower-truss of which is illustrated on this page, was introduced to this country from the Himalayas as long ago as the middle of the last century, it is still a comparatively rare plant. It is difficult to understand why this is so, because when in flower at Kew, usually during April, it attracts more attention than any other species, probably on account of its sulphur yellow flowers. Although quite hardy in the London district, it is doubtful if it would do well in colder localities, but anywhere in the Southern or Western Counties it ought certainly to be grown. It appreciates peaty soil free from lime, such as is afforded for Rhododendrons in general.

A Red Rose for Autumn.—Although not so free-flowering as some of the Hybrid Tea Roses, the Hybrid Perpetual variety *Commander Jules Gravereaux* is so good as to warrant attention from those who appreciate blooms during October and the early days of November. It makes a free, vigorous bush, and the large, fragrant flowers are of such a brilliant shade of red as to render them very conspicuous even on a dull day. They are of rather loose, semi-double character, a fact that doubtless has much to do with their opening well so late in the season. This brilliant Rose was raised by Croibier, and first put into commerce in 1908.

A Beautiful White-Stemmed Bramble.—One of the most attractive plants outdoors at Kew just now is the new white-stemmed Bramble named *Rubus giraldianus*. A colony of plants may be seen near the Pagoda, which forms such a prominent landmark in the district. The

stems of this Bramble are 6 feet or rather more in height, somewhat branched and very white. Now that flowers and most of the foliage have gone from other shrubs, the glistening white of this Bramble is most pleasing. It is a native of China, whence it was sent to this country a few years ago. *R. thibetanus*, though not quite so white as the foregoing, is also good, and is a native of the same country. Beyond good soil and the cutting away annually of the old wood and the weakest of the new, these Brambles call for very little attention.

The Perpetual Flowering Carnation Society's Show.—Undeterred by the war, this society is

and their friends free of charge. In connection with the show a conference will be held at 3 p.m., when Mr. M. C. Allwood will read a paper on "The Cardinal Points of Successful Carnation Culture Under Glass," followed by Mr. A. Harris, who will read a paper on "The Construction of Greenhouses for Carnation Culture."

Maize Cobs Malformed.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. W. C. Worsdell showed Maize cobs brought from Nyassaland by Mr. E. W. Davy, one of which had three or four narrow lateral cobs arising from the base and growing apparently in the axils of the lower bracts; the other was curiously fasciated at the apex. The latter was particularly curious, as the common view of the Maize cob is that it arises by fusion of several axes, and it might have been expected to exhibit the fasciation throughout its whole length.

A Good New Single Chrysanthemum.—When visiting Finsbury Park a few days ago, we were very much interested in a new single Chrysanthemum that the genial superintendent, Mr. F. Wright, informed us is named *Eastgate Gem*. It makes a dwarf, compact plant, not more than a foot high, and each shoot is studded with the dainty, bright pink, single flowers. These are of medium size, of good form, and each has a slight white band surrounding the yellow disc. It is used as an edging to a central bed of larger and taller varieties in the show-house at Finsbury Park, and for that purpose is ideal. When obtainable from nurserymen, we anticipate a brilliant future for this useful and charming new-comer.

The Pyracantha as a Shrub.—We were also interested in the large bushes of *Crataegus Pyracantha* that

are growing by the Manor Gate at Finsbury Park. Usually this handsome berried shrub is grown as a wall plant, where it is certainly very effective, unless the wall happens to be a red one; but to see it at its best it should be grown as an ordinary shrub in the border. The plants at Finsbury Park have been in their present situations for some years, and now measure as much as 10 feet in diameter. Although not fruiting so freely this year as we have seen them on previous occasions, there are sufficient berries present to indicate what a beautiful shrub it is if grown in this way.



RHODODENDRON CAMPYLOCARPUM, A BEAUTIFUL YELLOW-FLOWERED SPECIES FROM THE HIMALAYAS.

holding its winter exhibition on Wednesday next, December 2, at the Royal Horticultural Society's Hall, Vincent Square, Westminster. A good show is anticipated, and it is to be hoped that it will be well patronised by the general public. Although the society has suffered in the way of reduced subscriptions, the committee is putting a bold face on the matter by announcing that all the net proceeds of the show will be given to the Belgian Relief Fund. In addition, most of the flowers will be sold for the benefit of the same fund. A further concession to our much harassed Allies is the admission of Belgian horticulturist

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Echium callithyrsum at Bosahan.—Sir Arthur Vivian, whose charming gardens at Bosahan, Cornwall, were described and illustrated in our last issue, sends us the accompanying illustration of *Echium callithyrsum* growing at Bosahan. The plant was given to Sir Arthur in a small state in a pot about three years ago, and during the past summer produced thirty-eight fully developed spikes of its charming blue flowers. It is a native of the Canary Islands, and in the Scilly Isles often attains a height of 10 feet to 15 feet. Unfortunately, it is only hardy in the South-Western Counties of England, and possibly the warm localities of Scotland.



A BEAUTIFUL PLANT OF *ECHIMUM CALLITHYRSUM* IN SIR ARTHUR VIVIAN'S GARDENS AT BOSAHAN.

Buddleia Colvillei Flowering.—Our *Buddleia Colvillei*, which reached the b'ooming age three or four years ago, has this year for the first time thrown two heads of bloom a second time. One is now in flower. I may state we had had all the old blooms carefully cut off. It is fully exposed to the sea winds and is grown without any protection. C. M. TRESTRAIL, Southdale, Clevedon, Somerset.

Carrots Sown in November.—The seed catalogues and the directions on seed packets mostly tell us to sow the seed of Carrot in the spring, but for many years I have sown seed of one of the early varieties broadcast in a large frame about the middle of this month. From this sowing we pull delicious little early Carrots quite three weeks in advance of the outdoor crop, and at that season young, tender cooking vegetables are valuable indeed. Carter's Long Forcing Carrot is the best for the purpose.—F. H. C.

Escallonia montevidensis.—In reference to your query on page 499 of THE GARDEN regarding the hardiness of this splendid autumn-flowering shrub, it may be of interest to state that it succeeds in the open in the more favoured parts of Wigtownshire. About the end of September, when visiting that interesting garden belonging to Mr. Carrick-Buchanan, Corsewall House, Stranraer, where so many of these tender and interesting plants flourish in the open, I saw this growing freely in the open border and just beginning to open its panicles of white flowers. This is certainly a species worthy of more extensive cultivation in the milder parts of the country or near the sea, where these South American shrubs flourish remarkably well, and all grow freely in ordinary well-drained garden soil.—R. FINDLAY, Logan Gardens, Stranraer.

Finger and Toe Disease in Green Crops.—Your correspondent Mr. J. Crook, pages 552 and 553, issue November 14 of THE GARDEN, is quite right in stating that deep trenching of the soil will be helpful in checking this disease. It will not act as an infallible remedy. For a period of ten years I had charge of a large garden in which nearly two acres of winter greens had to be grown on the same plot year after year. The ground had been so cropped for many years previously, as the garden dated from 1717. Club-root was very bad when I took charge, so I had two pecks of agricultural salt and three pecks of unslaked lime per square rod trenched in every year, and then the plants (in a very young state) were planted. Also earthing-up, every autumn or in late summer, was done, and trouble from club-root ceased. It is important that seedlings be raised in fresh quarters every year.—G. G.

Chionodoxa sardensis, Stachys lanata and Apple Lane's Prince Albert. I was delighted to find in THE GARDEN, page 555, a fellow admirer of *Chionodoxa sardensis*. It is a dainty little jewel of a flower, charming in the garden, where every single spray of its pure and vivid colour tells, and even more delightful indoors at closer view in clear cut-glass vases. I was also pleased to see the photograph and note on page 543 concerning *Stachys lanata*. This beautiful foliage plant is so easy to grow and yet apparently so little known. I have often wondered that it is not used for bedding on a large scale. It makes a most excellent border to scarlet *Geranium* or to masses of any pink or yellow flowers. It gives less trouble than almost any other edging, requiring only to be trimmed occasionally and replanted every second or third year. When

used as foliage edging, it should not be allowed to flower. I can confirm from my own experience the excellence of Apple Lane's Prince Albert, illustrated on page 555. I have grown it for several years, and find it the best cropping, cooking and keeping Apple in my garden (where I grow some thirty varieties). No other Apple combines so many good qualities. It is, indeed, not the "Prince" but the "King" of cooking Apples, and really might now well be renamed King Albert in honour of our gallant Royal Ally. In addition to its practical merits, it has the loveliest of all Apple blossoms, and would be worth growing for its flowers alone. I plant May-flowering Tulips Striped Beauty and von Jehring beside my bushes, and these together form one of the prettiest pictures in my garden in May.—ANNE AMATEUR.

Mildew-Proof Roses.—The article by "Somerset" in your issue for October 31 was a very timely one, and should be taken seriously to heart by raisers of new Roses. I readily admit it is not an easy matter to deal with, inasmuch as hybridisation seems to encourage mildew rather than the reverse. Of course, some may say, "Yes, that is so if proceeded with upon the ordinary lines; but surely raisers can break away from the beaten track and strike out upon some other." I have two Roses to name that I venture to say will soon be in every garden, for their freedom from mildew will make them extremely popular. Both are the creations of that marvellous hybridist M. Pernet-Ducher, and are of the new group of Pernetiana Roses, a group to which we may look for many others with like characteristics. One is named Cissie Easlea. It is flowering now most beautifully, and its rich saffron yellow blossoms are certainly the loveliest among late autumn Roses. The foliage is glistening, of a large size, almost as massive as Camellia leaves. The wood is of a brownish mahogany colour, a delightful contrast to the flowers. A splendid feature of this Rose is the width of the erect clusters. I have had some with a spread of fully 18 inches. A lady looking at this Rose on November 4 thought it was Lady Hillingdon, so rich were its opening buds; and it is wondrously free-flowering. I can well believe what Mrs. Farmer wrote recently

that this variety was one of the best at Christmas time last year. The other beauty is Louise Catherine Breslau, which was depicted in the coloured plate issued with *THE GARDEN* for October 10. Here, again, we have glorious 'cathery foliage, a joy to look upon; and what a colour are its flowers—coral red, shaded chrome yellow, open flowers shrimp pink and copper. The blossoms lack refinement of form, but this is amply atoned for by their lovely colour. Anyone wishing to plant beds of unique-coloured Roses could not select any kinds more suitable, and there will be no terror of fungoid blemishes next season, for, strangely, they are even immune from red rust and black spot, diseases to which some of the Pernetianas are rather prone. I need not name Arthur R. Goodwin and its fine sport J. F. Barry, also of this tribe. The former is so well known and should be in every collection. I am sure J. F. Barry will be an acquisition, and I congratulate Mr. Piper in securing such a fine sport. I quite agree with Mr. Rigg in his remarks regarding Lieutenant Chaure. It is splendid, and I am advising all who ask me for a good free-blooming red Rose to plant it. It might almost be described as a dwarf Hugh Dickson, except that there is not quite so much of the scarlet hue. It is evident that locality and soil conditions have a deal to do with mildew or its absence, for I notice "Cheshire" extols the merits of Mme. Ravary, Caroline Testout and Mme. Abel Chatenay as being immune from mildew, whereas "C. Ambrose" brands them as sinners as regards mildew. There are a few of the true Teas especially noteworthy as being free from mildew. One of the best is Mme. Antoine Mari. It is a pleasure to look upon a mass of this Rose at any time, and with me it is almost evergreen. Then there are G. Nabonnand and its cream sport Peace; the latter all should grow, if only for its beautiful name. Anna Olivier and its sport Lady Roberts are also splendid. I really think mildew is hereditary, more especially upon the female parent's side. Lieutenant Chaure, already alluded to, was raised from Liberty x Etoile de France. This latter is a terror for mildew, inherited from Fisher Holmes and Mme. Abel Chatenay, its parents; but Liberty is, with me, free, and, as Mr. Rigg says, Lieutenant Chaure is free from the pest. I have no information as to the parents of Mrs. George Shawyer, but this Rose has been shockingly covered with mildew this autumn. Undoubtedly it is the thick, Holly-like leaved Roses that escape the fungus, and therefore the efforts of raisers should tend towards employing such in their cross-breeding. I am hoping that from Cissie Easlea, Louise C. Breslau and others we may obtain a good mildew-proof race, and Cissie Easlea seeds quite freely here.—**DANECROFT.**

The correspondence on this subject is very interesting. I have not seen a single variety that is quite free from mildew or can be relied on to be immune. Varieties possessing smooth leaves are certainly freer than those with rougher surfaces. Newly planted Roses are freer than those long established in a bed. Those in open quarters are freer than others in draughty places and on walls in hot positions. Plants in shallow soils where the roots get very dry at times suffer more than those growing in a deep loam which is more consistently moist. In my experience the above facts have always stood out prominently. I wonder how much mildew we owe to the dry, unrotted litter found round the roots in the soil!—**SHAMROCK.**

REGELIO-CYCLUS IRISES.

EARLIER in the year (see the issue of *THE GARDEN* for July 4) I had something to say in respect of this fascinating hybrid set, and promised at a more seasonable moment for planting to refer to them again. That time is now with us, and the moment being opportune and the soil in good condition, I will endeavour to redeem the promise then made. Those who are interested in these flowers or would like to make their acquaintance should turn up *THE GARDEN* for June 13 last, where will be found a lifelike illustration of one of the best of them and an interesting communication by the Rev. J. Jacob.

In my previous note I recorded both my successes and failures with these Irises, and by a reference thereto it will be seen that the latter were obviously the outcome of a desire to make of them a permanent success without lifting or special treatment. The successes were equally due to following a rule of thumb method of culture—that, indeed, laid down by Mr. Thomas Hoog (of Messrs. C. G. van Tubergen), Haarlem, through whose insight and enthusiasm the group came into being. This remarkable hybrid set has been evolved from the Oncocyclus and Regelia Irises, and those who have had the least experience of the former—the "impossible Cushions" as they have been called—will realise that the new race is not to be trifled with if success is to be assured. At the same time it must be distinctly stated that the difficulties are not insuperable.

On the other hand, these moderns, while embracing much of the fascinating beauty of the Cushion Irises, have also inherited not a little of the perennially inclined, genialy disposed Regelias, which renders them so much more amenable to cultivation. In a word, they are characterised by hardiness, free growth and flowering, a flower beauty only surpassed by the Cushions themselves, and cultural requirements of the simplest character within certain limits. Apart from these good attributes they occupy a place in the floral chain of the genus which no others have occupied half so well, a fact which should appeal to all lovers of choice flowers. They are practically with us from mid-April to mid-May.

Their Cultural Needs.—I have said that within certain limits this is of the simplest. Essentials in the case are briefly these: A rich, light, loamy soil, one freely charged with lime rubble for preference, perfect drainage, and a long annual rest such as is only afforded by lifting and drying each year. This last condition—this immunity from the excitability of soil influences—despite the obvious evidences of the plant's inclination to grow, is, perhaps, the most important item of all, since it is the continuity of the secondary or early autumn growth which it is so desirable should be restrained till the vicissitudes of the winter season are past. That accomplished, all else is plain sailing. To cover with frames or lights with the same idea of rest in view is not half so good, and, as I have proved to the hilt, brings failure in its train in the course of a couple of years. To ensure this complete rest the rhizomes should be lifted each year in July, shaken free of soil, and stored in an airy place in shallow trays till October, a course of treatment similar to that meted out to a choice lot of Tulips.

The Best Planting Season is October and November, when it will be seen that the plants are beset with sturdy half-inch-long shoots about the main or central ones, and that the root-fibres, in spite of a three months' enforced absence from the soil, show but little, if any, signs of shrivelling. Contrary to custom, these Irises appear best—as the subsequent growth clearly demonstrates—if the rhizomes are planted 2 inches deep, and it is a protection to the shoots, which incline naturally to push early through the soil. These, then, in very brief are the essential needs of these plants, and the measure of their appreciation will be also the measure of their ultimate success.

Varieties.—At the head of the poll I place Charon (a study in old gold and bronze, and indispensable), while Mars (rosy violet throughout and big black blotch), Isis (ruby red), Artemis (rose and grey), Jocaste (satiny white and violet), Eucharis (somewhat suggestive of the lovely Cushion Lorteti), with Psyche, Hera, Luna, Eurydice, Una, Felicitas, Medusa and Irene are others which impel admiration by their infinite grace and charm. **E. H. JENKINS.**

ROOM PLANTS IN WINTER.

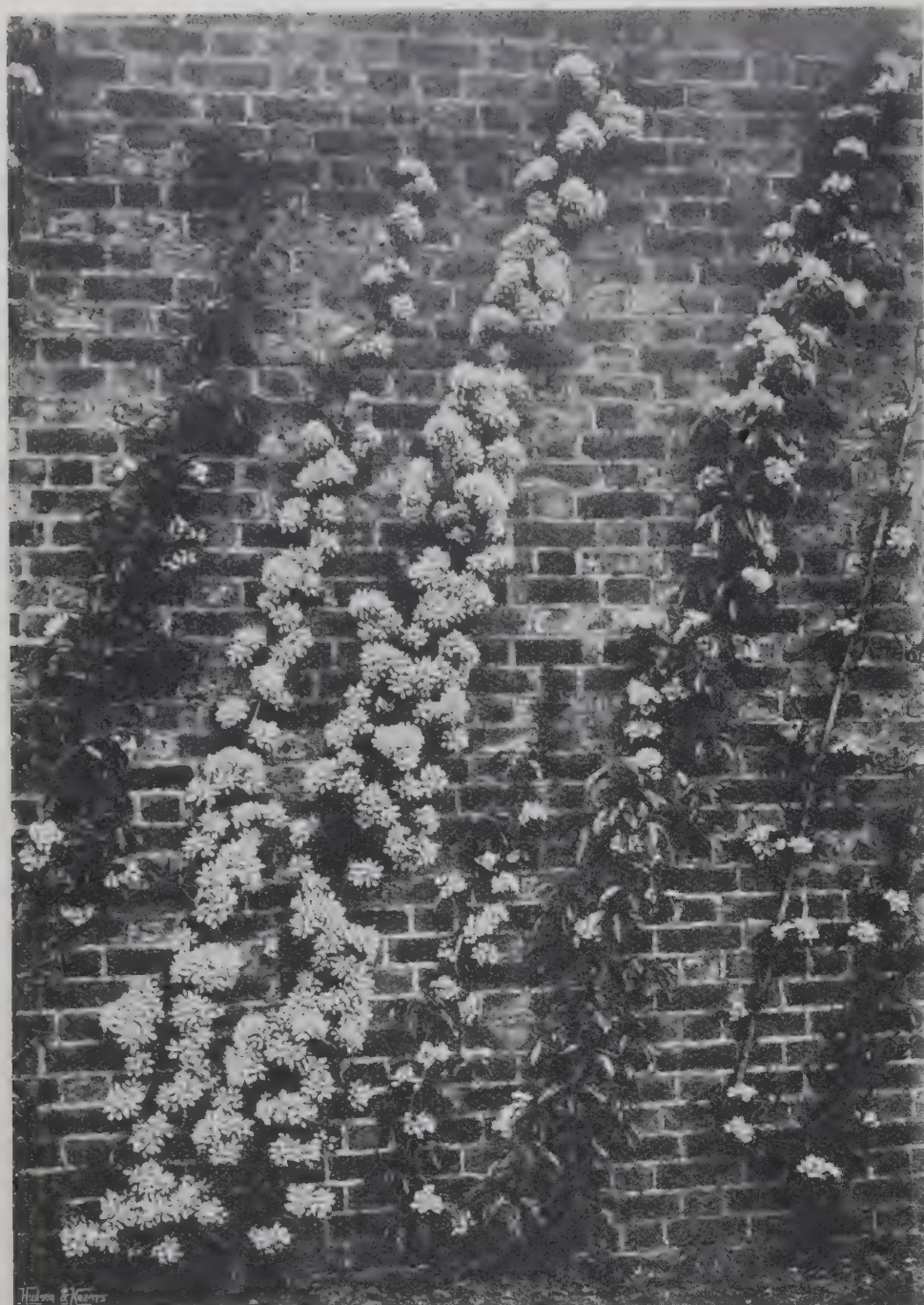
MANY plants that have succeeded fairly well in the dwelling-house during the summer and early autumn months begin, when winter sets in, to lose their freshness.

Of course, one looks for this in the case of plants of a soft-wooded character, but when such subjects as Palms, Araucaria excelsa, the hardier evergreen Ferns, and even Aspidistras look more or less unhappy, the cause needs seeking.

Causes of Failure.—There are several reasons that may be put forward for this, but one of the most likely causes of the plants being affected is that with the far greater number of fires, and the increased use of lamps or gas for the purposes of illumination, the atmosphere is rendered much drier than it was. This condition of things is very detrimental to plant-life, and consequently the plants soon show the effects thereof. The best lighting medium for the welfare of plants is electricity, and the worst, gas. The exceedingly dry atmosphere against which we have to contend also causes the soil in the pots to dry as quickly as, or perhaps even in some cases quicker than, in the summer, though, of course, in this respect the condition of the plants, the requirements of the different individuals and their position in the room all play an important part in the matter.

A question put perhaps more frequently than any other is, "How often should I water my plants which are in the window or elsewhere in the room?" This question is easily asked, but absolutely impossible to answer. Take, for instance, a Palm growing in a comparatively small pot. Around the bottom of this the stout roots whence the principal nourishment is derived are coiled. Under such conditions it is almost impossible to overwater it, whereas another one in a larger pot, and consequently a greater mass of soil perhaps unpenetrated by roots, would be killed by the same treatment.

Repotting.—A mistake very common among the uninitiated is that as soon as a plant appears



DOUBLE-STEMMED CORDON PEARS. THESE ARE EXCELLENT FOR SMALL GARDENS AND MAY BE PLANTED NOW.

somewhat sickly it is looked upon as wanting a larger pot, whatever be the season of the year. Even if it would be benefited by an increased size of pot, the operation of repotting should not be carried out after August; indeed, the months of April, May, June and July are best for the purpose, as there is then ample time for the new roots to take possession of the fresh soil before the winter. Such being the case, if plants at this season appear to be underpotted, the better way will be to wait till April before disturbing them at the roots.

When to Give Water.—As it is impossible to state any definite period when room plants should be watered, a few words of advice may be given on this point. In the first place, the soil must be allowed to get dry before watering, and then enough water should be given to thoroughly moisten the ball of earth. By dry it is not meant that the soil must be parched up so as to injure the plant, but rather that it is in that condition which a careful observer will at once see as likely to be benefited by a good watering. Above all things, avoid giving little drops frequently, as this will undermine the constitution of plants as well as mankind. When a plant needs watering, the better plan will be to take it from the room and stand it in a pail of slightly tepid water at such a

depth that the rim of the pot is covered. When the water has percolated through the entire ball of earth, which may be ascertained by the air bubbles ceasing to rise, it should be taken from the pail, allowed to drain, and then be taken back into the room. On no account, either in summer or winter, must stagnant water be allowed to stand in the jardinières in which the plants are placed.

Cleanliness.—With the dry atmosphere there is always a certain amount of dust, and to keep the foliage of the plants as clean as possible is a very important matter. Such subjects as the Aspidistra, India-rubber Plant and Palms of different kinds, whose leaves are smooth and of a firm texture, may be readily kept clean by occasionally sponging with lukewarm water. On the other hand, such subjects as Ferns, whose foliage is more intricately divided, collect the

dust to a greater extent than the smooth-leaved plants, and are also more difficult to clean. The better way is to take advantage of a mild day (and there are many such during the winter) to give them a syringing. On no account, however, must sponging or syringing be done during severe frost, while watering should then, if possible, be avoided, or, if absolutely necessary, it should be done in the morning so as to allow any superabundant moisture to dry up.

Treatment in Cold Weather.—Another very important matter during sharp, frosty weather is to bear in mind that the greatest cold is, as a rule, experienced in the night when the fire is out, and consequently the temperature of the room falls rapidly. The coldest part is, of course, in the window, where most of the plants are usually kept; and in order to make all safe when there is any reason to expect a severe night's frost, the plants should be removed from their more exposed position to the centre of the room, where, arranged in a close group and covered with a few newspapers, they will be safe. When possible, however, they should be stood in the window, so as to obtain the full measure of light which is so essential to the welfare of plants in general.

H. P.

CORDON FRUIT TREES FOR SMALL GARDENS.

ALTHOUGH cordon fruit trees are undoubtedly grown much more extensively than they were ten or fifteen years ago, amateurs generally do not seem to appreciate anything like to the fullest extent their value for small gardens. This is rather curious, because they are undoubtedly the type of tree *par excellence* where space is limited, and when they are once furnished with fruiting spurs are so simple to manage that the veriest tyro could scarcely make a mistake with them. Cordon trees may consist of one, two, three, four, or even more stems, each of which it is desirable to have covered with sturdy fruit-spurs from as near the ground as possible to the top. Generally speaking, however, those with only one, or at the most two stems are the most serviceable, those having more usually being chosen for some special position, such as a pillar or buttress to a wall, as shown in the illustration on the next page.

Where to Grow Cordons.—Although this simple type of fruit tree is usually regarded as highly desirable for growing against a wall or fence, such positions are by no means essential to their well-being. They will do almost, if not quite, as well fastened to wires or other supports beside the pathway in the garden, where they take up but little room and provide a good supply of the very best quality fruit. So as to get a longer stem than would be obtainable if planted upright, single and double cordons are usually planted sloping at an angle of about 45°, and preferably from south to north, so that they get all the sun possible. When trained to a wall, a slope in the direction named cannot, of course, always be provided.

Planting.—This can be carried out at any time from early November until the middle of March, providing the ground is not sodden or frozen hard. Young trees can be obtained from any of the fruit nurserymen advertising in *THE GARDEN*, and the earlier during the period named they are put in the better. The soil must have been previously well prepared by deep digging and the adding of some well-decayed manure to the bottom spit. It is not advisable to fasten the trees to wall, fence, wires or other supports for two or three weeks after planting, as, if the soil settles very much, the roots will be drawn partly out of the ground. If supports are necessary to prevent the trees being blown about in the meantime, a few rough stakes thrust well into the ground, and the trees tied lightly to them, will answer the purpose.

Pruning.—As already hinted, this is a very simple matter indeed. The kinds of fruit most suitable for growing as cordons are Pears, Gooseberries, Red and White Currants, and most varieties of Apples. These will all produce fruit on short spurs or side growths, and it is to the securing of these growths that the cultivator must pay attention. Usually when cordon trees are bought from the nursery they have two or three sets of spurs near the base, the remainder of the main stem being of the current year's growth. The spurs that are there may be left alone and the main shoot cut back to a good plump bud situated from a foot to 18 inches from the uppermost spurs. Early next summer all the dormant buds in this main shoot will

produce growths, and about the end of June all the side or lateral ones should be cut back to within four buds of their bases. The main stem or leader will, of course, be allowed to grow unchecked. Any shoots produced from the spurs must be cut back in the same way as advised for side shoots on the upper part of the main stem. If secondary side growth is made, this should be cut or pinched back close to where the cut was made in June. In the winter these side shoots or stumps are cut to within two buds of their bases, *i.e.*, two of the four buds left at the summer pruning are cut away. This is the way that fruit-spurs are made. When the main stem has reached the desired distance and is covered with fruit-spurs, all that is necessary is to cut in all side shoots at the summer pruning and reduce the stumps at the winter pruning. Owing to the hard cutting, it is not advisable to grow Cherries or other stone fruits as cordons, though in many localities Plums are grown in this way and seem to do very well. The fruit obtained from cordon trees, owing mainly to the full exposure that it gets, is usually of the very best quality, highly coloured, and easily protected from birds by means of old fish-netting.

A. B. ESSEX.

SOME GOOD SHRUBS FOR FORCING.

THE time has now arrived when those who wish to make displays of forced shrubs for greenhouse decoration in spring should commence bringing their plants into a little heat, for it is better to bring them into flower gradually, by allowing two or three weeks longer for forcing, than to subject them to excessive heat in the hope of flowers appearing quickly.

Forcing plants, it must be remembered, is a source of some considerable amount of work and expense; consequently it is advisable that really good examples only should be requisitioned—not, as sometimes happens, the leavings of a batch of plants which were not considered good enough for outdoor planting or half-worn-out shrubs from a border. In some nursery gardens, more particularly Continental ones, a speciality is made of shrubs for this purpose, and really first-rate material may be obtained at a moderate price. When plants are grown specially for the work, little but flowering wood is found, for all weak shoots are removed to throw all possible strength into the principal branches. Moreover, they are not allowed to flower and so waste a certain amount of energy in the intervening time between their propagation and the period when they are ready for the forcing-house. Special attention is given to the ripening of the wood, and in some instances the large roots are cut about the end of August to check growth and facilitate ripening.

Assuming that such plants have been obtained and that they are now in pots plunged out of doors, it is as well to anticipate frost by scattering leaves, hay or Bracken among them in order that they may be lifted at will, even during an extended period of frost. Should the plants not have been procured, however, no time should be lost in obtaining a supply, and if they can be had established in pots, select them by all means.

Plants which are forced early are naturally weakened more than those which are brought into

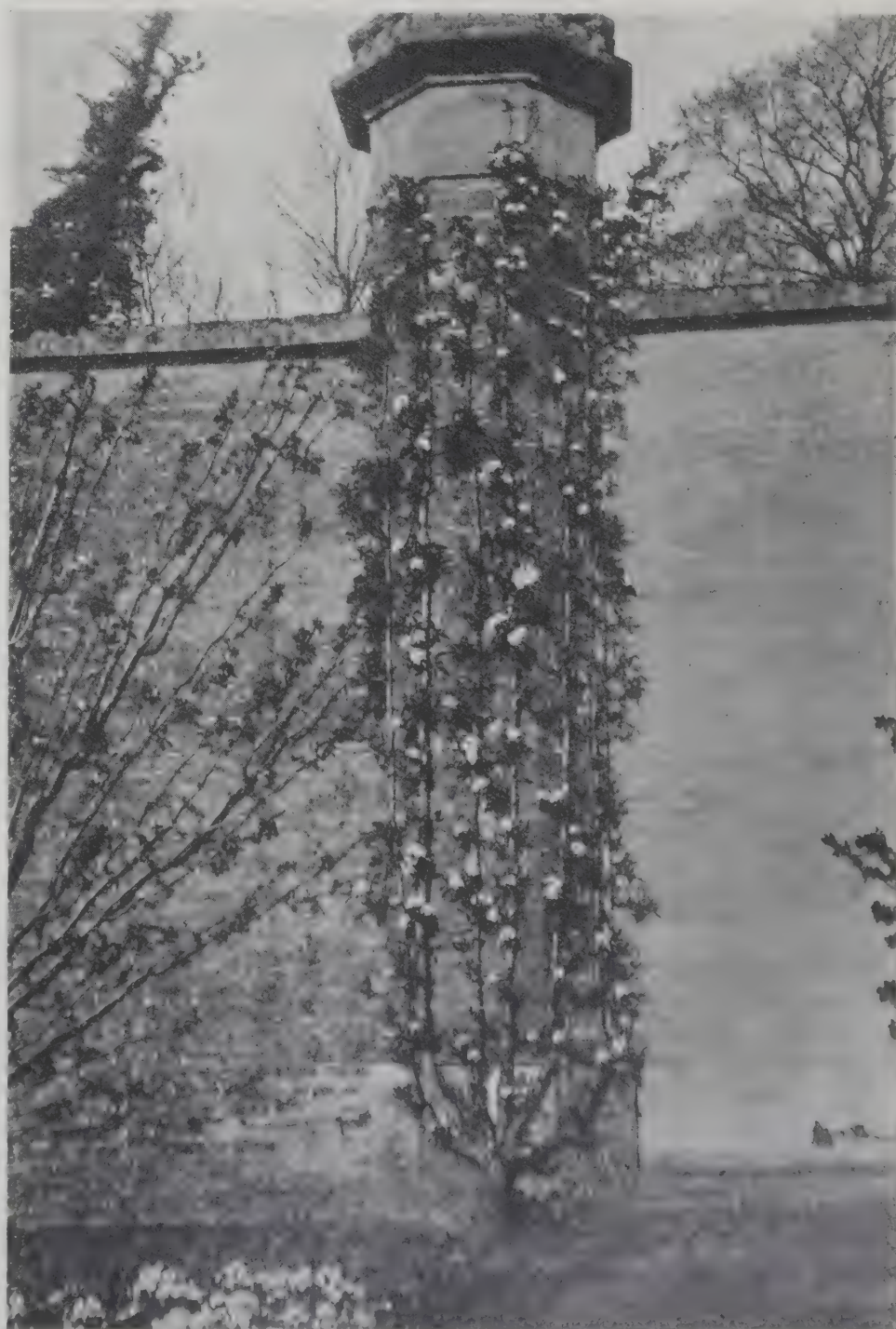
blossom nearer the normal time. For this reason the owner has to consider whether it is better to throw the plants away as soon as the flowers have fallen, or whether it will pay him better to find them house-room for a while and then plant them out of doors for a season. The cheaper kinds are often not worth keeping, but such as double-flowered Peaches, Cherries and *Wistaria sinensis* should be retained; in fact, the *Wistaria* and some of the double-flowered Cherries may be grown in pots and forced successfully several years in succession. *Rhododendron sinense*, better known perhaps as *Azalea mollis*, is a plant which does not pay for forcing a second year, while it usually takes several years to become strong enough to force a second time. Really fine plants carrying forty or fifty buds may often be purchased at from 9d. to 1s. 3d. each, and when once forced may either be planted out permanently or be thrown away. Evergreen *Rhododendrons*, again, rarely give satisfactory results if forced two years in succession, but a year in nursery quarters is often enough to enable them to pull themselves together and set sufficient buds to warrant their being forced again. The *Lilac* is another shrub which cannot be forced profitably in two successive years, while it pays to let it have two years' rest between the periods of forcing. The most satisfactory results are obtained by cutting forced *Lilacs* well back after flowering, then allowing but a few shoots to mature, the remainder being rubbed off while quite small. The succeeding year a few shoots only are again left to mature, which allows the maximum of strength to go to these shoots to form well-matured wood and buds.

In most kinds good, vigorous shoots are required on plants which are to be forced, and this is particularly the case with *Spiræas*, *Deutzias*, *Forsythias*, and the double-flowered forms of *Prunus japonica*, *P. triloba*, *Kerria japonica* and Peaches; but in a few instances stunted growth proves most productive of flowers. The best example of this is *Wistaria sinensis*, for it never blossoms better than from stunted spur-like shoots.

The size at which shrubs may be forced depends on the size of the forcing structure, for though, usually, comparatively small ex-

amples are used, fully developed specimens of *Guelder Rose*, *Lilac*, *Forsythia suspensa*, *Rhododendrons* and many other kinds may be requisitioned. Should large plants not be required for future planting, but can be thrown away as soon as the flowers are over the roots may be reduced to a moderate extent to save pot room, or the balls may be bound up in mats and stood in baskets or boxes during the time they are indoors. It is always necessary to remove forced shrubs from the forcing-house to a cooler structure as the flowers begin to open, or the flowering period will be a very short one. Flowers which fall quickly, such as *Azaleas*, may be made to remain on the plants for a fairly long period by fixing them with floral gum, which may be obtained from any seedsman or horticultural sundriesman.

It is only necessary to mention a few of the many shrubs suitable for forcing—others will readily suggest themselves to the minds of those who wish to force a larger collection: *Spiræa arguta*, *S. van Houttei*, *S. confusa*, *S. prunifolia flore pleno*, *Deutzia gracilis*, *D. parviflora*, *D. Lemoinei* and all the *gracilis* varieties and hybrids, *Forsythia suspensa*, *Prunus persica flore pleno*, *P. serrulata*, *P. triloba*, *P. Pseudo-cerasus*, *P. japonica flore pleno*, *Pyrus floribunda*, *P. Scheideckeri*, *Wistaria sinensis*, *Neviusia alabamensis*, Japanese Maples, *Weigela* or *Diervilla* *Eva Rathke* and other kinds,



A PEAR TREE TRAINED TO COVER A BRICK PILLAR

Viburnum Opulus sterile, *V. tomentosum plicatum*, *Robinia hispida inermis* and *Rhododendrons*, deciduous and evergreen. All are, however, not suitable. Of deciduous ones *R. sinensis* and its numerous varieties and forms of *R. flavum* and *R. calendulaceum* are the best, while the earlier-flowering evergreen kinds answer more satisfactorily than the later ones. In addition to these there are many other kinds, such as *Magnolias*, *Hydrangeas* and *Kerrias*, which may be pressed into service. W.

THE INDIAN BEAN.

(*CATALPA BIGNONIODES*.)

THIS is one of our most valuable flowering exotic trees, there being nothing so showy among the larger-growing trees which blossom during July and August. There is a further period of interest, if not of exceptional beauty, during late autumn and early winter, when the trees are laden with long, slender, Bean-like fruits. *Catalpa bignonioides* forms a round-headed, wide-spreading tree 30 feet to 50 feet in height, with large cordate leaves and white flowers $1\frac{1}{2}$ inches across, spotted with purple and yellow in the throat. These are freely borne in large terminal panicles, rather suggesting the Horse Chestnut. A few of the flowers mature fruits, usually from about four to a dozen in each panicle. During a fine autumn the trees are much more heavily laden than when it is wet and cold. The long, slender, pendent fruits vary from 6 inches to a foot in length, occasionally more, and are rather thicker than a pencil. They hang on the trees for some time after the leaves have fallen.

The Indian Bean Tree is a native of the Eastern United States, and was first introduced in 1726. Though *C. bignonioides* is the better-known name, *C. syriaca* is still used by some cultivators. It is a very good tree for towns, there being several fine specimens in and around London. Coming from the Eastern United States, it will be readily understood that the best trees in this country are usually found as lawn and park specimens in the South and West of the British Isles. The best method of propagation is by seeds, though cuttings will root in a frame during the late summer. This year a medium-sized tree, growing near the Temperate House at Kew has produced a very heavy crop of these curious pods, so well shown in the accompanying illustration, and has been a source of much interest to visitors. This tree is situated by the canal beds at the end of the Temperate House nearest King William's Temple, and even as late as the 16th inst. was carrying a great many fruits. It would be interesting to learn whether trees growing in other parts of the country have fruited well this year. We should be glad to hear from any reader, particularly in the colder parts of the country, who has noticed seed-pods.

PREPARING A ROCK GARDEN FOR AUGUST AND SEPTEMBER.

A GARDEN is a spot to be enjoyed all the year round, but there are some unlucky people who have to "crib, cabin and confine" their gardening instincts within the limits of the holiday months of August and September, and in August, alas! even Nature herself inclines to take a little siesta. Then the rock garden more especially loses some of its attraction unless we can think out some flower-scheme for that particular season; for while there are

below the tall, upright spikes of fringed white flowers. This *Pavia*, with hardly the characteristics of even a dwarf tree, for it does not exceed 8 feet or 9 feet in height, spreads by suckers and requires a certain amount of room, but is well worth the attention of those who have a suitable position and space to give to it. Another August-flowering shrub is the evergreen *Olearia Haastii*, one of the New Zealand Daisy Bushes, which covers itself with heads of closely packed white flowers, not unlike those of *Milfoil*. This appears to be quite hardy everywhere, and would not be out of character in some aspects of rock gardening; but to prevent its becoming scraggy, it should be trimmed a little into shape after flowering. *Caryopteris Mastacanthus*, a pretty blue-flowered shrub about two feet high, which also flowers late, might be used with advantage to break the level of a low rocky bed.

Among true mountaineers we may place in the forefront the Swiss *Eryngium alpinum*—"la reine des Alpes" on M. Correvon's authority—for, after all, not all alpine crouch before the blast. *E. amethystinum* is a very similar Dalmatian species, though more straggling. Both grow easily in dry soils and are delightful plants, lasting through August and well into September. *E. oliverianum*, the species generally seen in English gardens, is taller and more vigorous in habit than either of the preceding. These are becoming rare even in their own haunts from the ruthless snatching of tourists—all the more reason, therefore, for their preservation in gardens. Then there are several autumn-flowering *Gentians*. In a moist bay at the foot of rocks—often an accessory of an important rock garden—where the soil is fairly deep, *Gentiana Pneumonanthe* and its still more beautiful white variety will be quite happy and have no objection to sun and breeze. The Willow *Gentian* (*G. asclepiadea*), on the contrary, prefers a cool spot facing north and reaches a height of 18 inches or more. It grows naturally in damp, rocky woods, but is not tied and bound to such spots under cultivation. *G. Andrewsii*, though not so ornamental as some others, and best in bud, is, like the above, another late-flowering lover of damp spots. A charming *Gentian* of lesser dimensions, *G. ciliata*, with fringed flowers of a delicate soft blue, which grows abundantly by rocky waysides in Luxembourg and Germany, likes a drier position and does well between stones. A Himalayan species, *G. Kurroo*, which has



SEED-PODS OF THE INDIAN BEAN, *CATALPA BIGNONIODES*. A TREE IS FRUITING VERY FREELY NEAR THE TEMPERATE HOUSE AT KEW THIS YEAR.

plenty of bold and handsome plants, with flowers of red and yellow shades innumerable, for the perennial borders, the buxom vigour of these would be quite out of place among lowlier rock plants. It may be possible, perhaps, though not very easy, to suggest some available material.

As a rule a rock garden is not immediately in evidence, therefore no apology need be offered for calling attention here to a fine August-flowering shrub, or dwarf tree, which might very well find a position on the way to it. *Pavia macrostachya* is then very beautiful, though strangely seldom met with. It is a kind of etherealised Horse Chestnut, with graceful, fingered leaves drooping

sky blue flowers, nearly two inches long, blooms in August and September, and is much more amenable to cultivation than it was once supposed to be, growing freely in suitable quarters, where it likes to be left alone without disturbance. This species enjoys moist but well-drained peat and loam, and plentiful watering in summer.

Of autumn-flowering *Campanulas* there are not many, but two or three may be mentioned. *C. tommasiniana*, 9 inches to 12 inches high, appears to be a later-flowering variety of *C. waldsteiniana*, so nearly are they allied. The trailing *C. fragilis* and *C. isophylla*, both Italian species, and perhaps not over-hardy in all districts,

are due to flower in August and prefer semi-shade. *C. Allionii*, 3 inches to 4 inches high, though not always easy to manage, comes also in August and is worth trying, as it may go on flowering into September. *C. carpatica* lasts long through the summer, and so does *C. rotundifolia*—the Bluebell of Scotland and as charming as any—but, in thinking of plants for August and September, it is safer to restrict ourselves to those which naturally come into flower during those months, otherwise a little variation in the season may leave us bereft when we most want the rock garden to look its best. It must always be borne in mind, however, that locality, north or south, makes all the difference in time of blooming. The blue-flowered *Cyananthus lobatus*—a Himalayan scion of the same Bellflower order—is very charming where it succeeds, and delights in sandy peat and leaf-mould in a partly shaded position.

For a trailing plant to grow over the face of a rock, another Himalayan plant, *Polygonum vacciniifolium*, may be noted, the rosy spikes of bloom, and leaves often tinged with red in the autumn, being seen to advantage draping the grey surface of the stone. Thymes are always delightful in autumn, and especially the golden form of the Lemon Thyme, which increases in brightness of colouring as the year advances. Snapdragons—wall plants by nature—can be used most effectively in their best forms. Of the same genus, the creeping *Antirrhinum glutinosum*, a true rock perennial, though not a very long-lived one, will spread its little mat of white Snapdragon flowers all through the summer and autumn; and also its near ally, *Linaria alpina*, of brighter colouring, is always welcome, and will sow itself where it is happy.

Probably no upland plants are better fitted to give autumn colour than some of the varieties of Heather and Ling. There is the Cross-leaved Heath (*Erica Tetralix*) for any moist, boggy spot; many varieties of *Calluna* or Ling, for exposed positions; the Scottish Heather (*E. cinerea*); the Dorset Heath (*E. ciliaris*); and the Cornish Heath (*E. vagans*), a very bright and lovely species which must be seen on the moors of Lower Brittany to be thoroughly appreciated—all of these may be pressed into the service to make a Heather garden. Most beautiful of all is the white form of the Irish Heath (*Daboecia polifolia*), which can be freely planted anywhere in Heath soil without fear of clashing colours. The great point to remember is that all of them are the better for a clipping after the flowering season is past, or they are apt to get ragged and lose much of their beauty. Naturally, a sandy peat soil suits them best, but they are not dependent upon it, and these hardy Heaths come in well sometimes where more fastidious plants fail. For example, a rough bank, mostly clay with some sand, much inclined to slip bodily away, and hurriedly shored up with huge water-washed boulders from the bed of a Welsh river—about as unpromising material for rockwork, even of the rudest kind, as could be found—was made quite beautiful by a liberal planting of these brave Heaths.

But there are not many alpenes, strictly speaking, that can be relied upon for late summer and

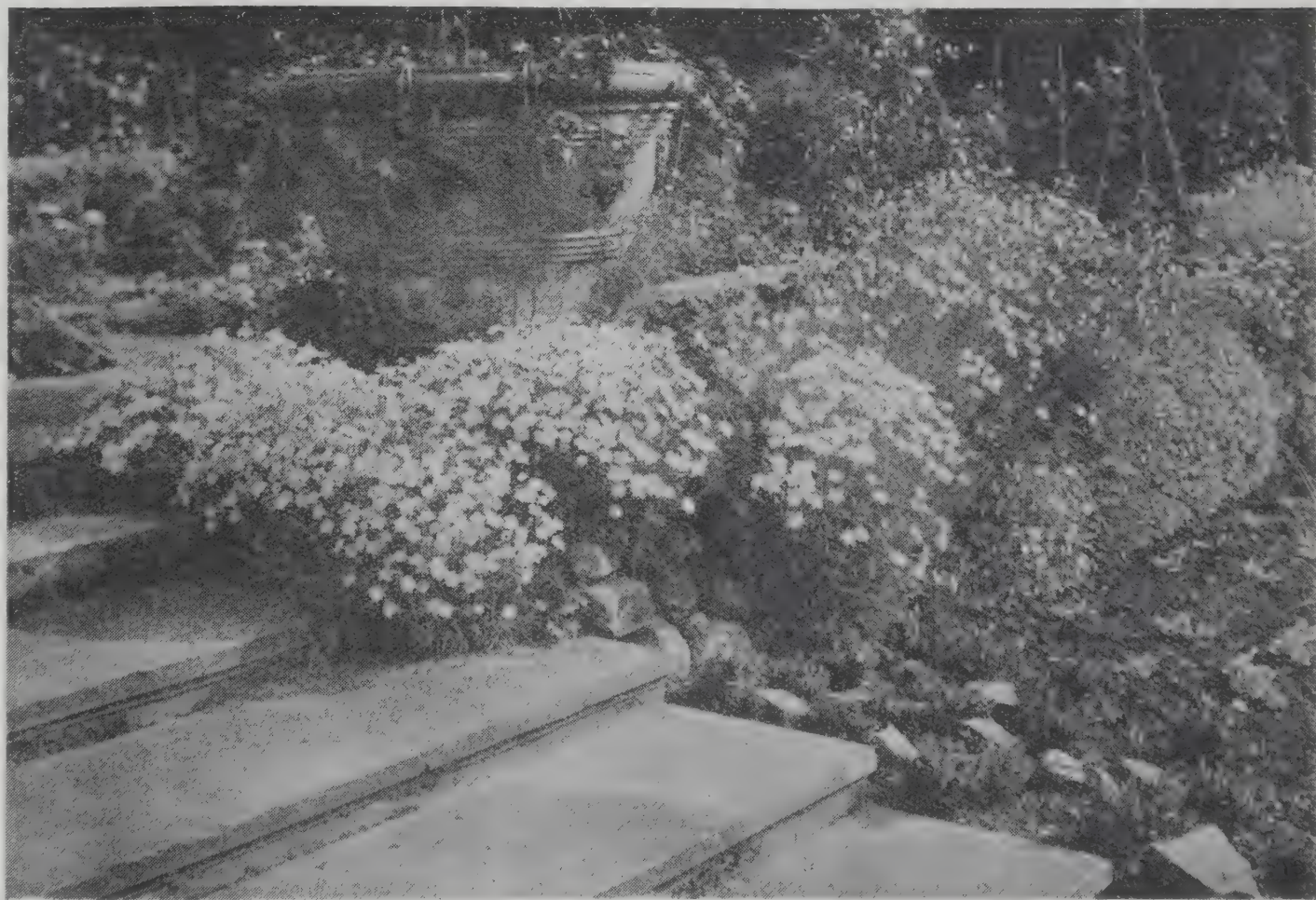
autumn blooming, and we must fall back upon other types that may not be out of character in the rock garden. *Zauschneria californica* is one of these, and admirable for a position among stones, for it insists on well-drained soil and as sunny a location as can be found for it. The scarlet tubular flowers are well set off by the grey-green of the foliage, and charming when seen in perfection. It appears, however, that two varieties are in cultivation, one very free-flowering, the other just the reverse, which is often the cause of disappointment. Almost everyone, too, would be pleased with the effect of good clumps of the New Zealand Pheasant's-tail Grass (*Apera arundinacea*) for raised positions, especially when the slender, arching flowering stems of shining brown purple are in perfection, as they are in August and September. It grows from 18 inches to 2 feet high here in Sussex, and, considering its merits, is not too well known. The Iceland Poppy (*Papaver nudicaule*), which, though

work is done, when the stems should be cut away. It must be admitted that this *Convolvulus* has a fault, for, like all its tribe, it is apt to encroach; but it never becomes a pest, like those others, and is generally beloved of all who grow it. It likes a warm, sheltered position, and goes on flowering well into the autumn. A longer list might be given if other miscellaneous plants were included; but it is already long enough to show that the rock garden in August and September need not be lacking in flowers.

K. L. D., in *Country Life*.

SEEDLING PINKS FOR WALL GARDENS.

For dry retaining walls there are few more suitable plants than seedling Pinks, those wild kinds, such as *Dianthus deltoidea* and *D. plumarius*, seeds of which can be obtained from almost any seedsman of repute. Apart from the additional vigour that seedlings usually possess, there is



SEEDLING PINKS GROWING IN A DRY RETAINING WALL.

perennial, succeeds almost better treated as an annual, comes into flower from early spring-sown seeds by the end of July, and is at its best when autumn-sown plants are over. The tiny Alpine Poppy is a miniature edition of the same—so botanists tell us—though for garden purposes it is entirely distinct, and does well under similar treatment.

In Northern gardens, *Heuchera sanguinea* will produce its lovely coral spikes at this season. *Viola cornuta*, too, in its improved purple form, is very attractive, and Red Valerian (*Centranthus ruber*), especially in its so-called scarlet form, a plant to be placed on some high point of vantage where it can be seen from afar, is very fine: but all these would come under the head of summer flowers in the Southern Counties. Where a twining plant is wanted, *Convolvulus althæoides*—a slender, silvery-leaved perennial with rose coloured flowers—is desirable, both in leaf and flower, and dies down for the season after its

generally some variation in the colour of the flowers, which, to all except expert alpine plant lovers, and even to some of them, is pleasing. The seed is usually sown in early spring in pans or boxes filled with sandy soil, these being stood in a cold or very slightly heated frame until germination, which may be rather slow, is effected. As soon as large enough the seedlings are pricked off into other pans or boxes, and subsequently either transferred direct to the walls or transplanted into nursery beds, where they stay until the autumn or the following spring. Where seedling Pinks are available now, they may safely be planted in dry walls, providing the roots are disturbed as little as possible. They appreciate gritty loam, and if a little old mortar can be mixed with it, so much the better. Even when not in bloom the glaucous grey foliage of many of these seedling Pinks is very charming, especially during the winter months.

D. D.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Strawberry Plants for Forcing.—If ripe Strawberries are desired early in the year, no time should be lost in selecting the plants and placing them under cover. Well-rooted plants with prominent crowns are best for this purpose, and if worms are present in the pots, these may be destroyed by watering with weak lime-water, which should be given in sufficient quantity to moisten all the soil. The best way to start the plants into growth is to plunge the pots in a gentle hot-bed composed of Oak leaves, which should be trodden tightly together in a brick pit until the top of the bed is within a foot of the roof glass. When the temperature of the bed reaches 70°, the plants may be plunged to the rims of the pots; but care must be taken that the temperature of the bed does not become too high, or the roots will suffer in consequence.

Peach Trees in Late Houses.—These should be pruned and trained with as little delay as possible. Cleanse the house thoroughly and see that the border is in good order. If the roots are near the surface, all that is necessary is to remove an inch of surface soil and replace it with loam and bone-meal. This must be made moderately tight, and if the border is at all dry, give a good soaking of clear soft water.

Cucumber Plants from which supplies are being gathered should be given a night temperature of 70°. Keep the growth well within bounds by frequently pinching the leading shoots. All rough, overgrown leaves must be removed to make room for young fruitful shoots, which should be pinched at the first or second joint beyond the fruit. Top-dress the bed lightly as often as the young roots appear through the soil, and promote a humid atmosphere by frequently damping the walls and floor of the house.

Plants Under Glass.

Propagating Chrysanthemums.—As soon as good, healthy cuttings are available, they should be inserted in small, clean pots of sandy soil and placed in a cool propagating-pit. This ought to be kept quite close until young roots have been produced. Cuttings should be selected from the bases of the plants, and never more than 2 inches long. Care must be taken that the base of each cutting rests on the soil, which should be made moderately firm. As soon as the cuttings begin to make fresh growth, they must be gradually accustomed to light and air until they are removed from the propagating-pit to a more exposed position.

Watering Palms.—All Palms in a healthy condition require a liberal supply of water at the roots, especially when strong fire-heat is necessary to keep the temperature as it should be, as under these circumstances the atmosphere is liable to become too dry. This must be guarded against by frequently syringing the plants and their surroundings, in order to keep insect pests in check. Some stimulants should be applied occasionally to keep the plants in good health.

Salvia splendens.—As these plants pass out of flower, a few of the healthiest specimens ought to be slightly cut back and placed in gentle heat for the purpose of producing cuttings, and these should be inserted in small, clean pots of sandy soil as soon as they are large enough to handle. Slight bottom-heat will be an advantage, and as soon as sufficient roots have been made, the syringe must be freely applied to keep red spider in check.

The Flower Garden.

Violas.—It is not too late to propagate Violas for spring planting, providing the plants were cut back a month ago, for by this time numerous young shoots will have been produced, and when the old plants are pulled to pieces many of the shoots will have formed roots. These should be inserted in sandy soil in frames about a foot from the glass, and may be kept close for a week or two; but when once established, air must be freely given to keep them from becoming drawn. During mild days the lights should be removed with the same object in view.

Antirrhinums.—Young plants raised from autumn-sown seeds which are intended to flower in May and June ought to be pricked into shallow boxes as soon as large enough to handle. After this has been accomplished, the boxes should be placed on a bed of ashes near the glass in a cold pit. Ventilate freely after the plants have become established and do all that is possible to keep them stocky.

Lawns.—Nothing is more detrimental to the appearance of an establishment than a badly kept lawn, occupying as it does a position near the mansion. Frequent sweeping and rolling is necessary during the winter, especially if the weather is mild. A light dressing of decayed horse-manure should be applied to the grass in early winter, and this ought to be frequently brushed in among the grass while the weather is mild. Clip the edgings and do all that is possible to give the place a smart appearance.

The Hardy Fruit Garden.

Sweet Cherries.—The pruning and training of these trees should be pushed forward as quickly as possible. If the young shoots have been carefully stopped during the summer, very little will be necessary now beyond thinning some of the worthless wood from the spurs and cutting back the leading shoots to within a foot of last season's growth. In tying the shoots to the wires, great care is necessary that they are not fastened too tightly, for Sweet Cherries are very subject to canker, and this is frequently the cause. Cherry trees in the open plots or in the orchard should have their branches freely thinned, and young growth be cut back to within a few eyes of the previous season's growth with a view to producing fruiting spurs.

The Kitchen Garden.

Spring Cabbage.—When the ground is in a suitable condition, the surface should be lightly broken up with a hoe and any blanks made up with plants from the seed-bed. The remainder of these ought to be pricked out 4 inches apart, and will make good, strong plants ready to put out in March. From these a good supply should be available in July.

Mustard and Cress.—Make weekly sowings and cover the seeds with sheets of paper. A slightly heated pit is best for this purpose.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

French Beans.—Where ample accommodation is at command, the forcing of these can be carried out almost throughout the season. For ordinary purposes, however, the present will be soon enough to make a start, where these have to be grown in pots. The number of seeds to be sown must be determined by the demand, but it is best to make a small sowing, say, once a fortnight, than to put in a large number at once. Ordinary garden soil, with the addition of some good loam, will suit them admirably. When the Beans are a few inches high, they should be supported by small stakes or twigs, otherwise the result will be a tangle.

Cauliflowers.—The plants that are being wintered in frames need to be frequently examined at this season, and, unless in very severe weather, the lights must be kept open. An occasional dusting of soot or lime will not only ward off slugs, but tend to sweeten the atmosphere.

Potatoes.—If the sets intended for early forcing were put in boxes to start, as advised at the beginning of the month, they should now be sufficiently advanced to be planted. If only a very few are required for early forcing, these could be grown in large pots; but for the most part those planted out in heated pits will be found to give by far the better results. Before planting, fork some leaf-mould into the soil, which will tend to keep the tubers dry.

Lettuce.—Any plants that were left outside on a sheltered border should be carefully lifted with a good ball of soil attached and planted in cold frames. These will be found to come in very handy at a time when salads are at a premium.

Carefully remove all decayed leaves and see that the plants are not overmoist at the roots, which would cause damping.

The Flower Garden.

Shrubs.—In many districts it is necessary to afford protection to some of the more tender trees and shrubs, and if not already done, this should be seen to at once. On no account must any shrub be bound up with mats as if it were leaving the nursery to be despatched on a long journey. This is not only unsightly, but injurious. A few branches of Spruce or Yew tied round will be found to be ample, or for smaller subjects dry Bracken will meet the case. When the weather interferes with digging or turfing, the shrubbery should be gone over, all dead branches cut away, and the whole made tidy.

Rock Plants.—The greatest care should be taken of those choice rock plants that have been transferred to frames for protection during the winter season. When it is remembered that they suffer more from dampness than cold, it will be seen how necessary it is to admit air on all favourable occasions. If in pots, these should be plunged in pure sand, and if planted out the same material ought to be used, with the addition of some powdered charcoal. Look over the plants from time to time and remove all decayed leaves and anything that would create dampness.

Lobelia cardinalis.—Owing to the absence of frost, this plant continued to bloom very late in the season; indeed, it was still flowering here during the first week in November, and the lifting and storing of the roots was delayed in consequence. Any plants still in the ground should be lifted at once and placed in boxes. These are best stood in a frame or shed and kept moderately dry.

Plants Under Glass.

Begonia Gloire de Sceaux.—This fine winter-flowering subject will now be coming into bloom, and should be placed where the atmosphere is somewhat dry. As the plants will have exhausted the soil in the pots, artificial feeding must be resorted to. This may take the form of liquid manure, with an occasional dusting of Clay's Fertilizer.

Poinsettias.—These will now be developing their bracts, and in the case of the most forward, artificial feeding should be discontinued. Those intended for later use may still be given liquid manure. To preserve the blooms in a cut state, the stems ought to be dipped in a few inches of boiling water immediately they are cut.

Campanula pyramidalis.—Although this is more or less hardy in many districts, still, in the Northern Counties, the plants will be all the better for the protection of a cold frame or a late Peach-house. Young plants should be kept growing, and may be potted into 6-inch pots as they are required.

The Hardy Fruit Garden.

Pruning.—As all the trees will now be divested of their leaves, pruning may be proceeded with on all favourable occasions. This work should only be done by a person having a knowledge of the various varieties of trees to be pruned. In the case of bush or standard trees, perhaps all that will be necessary will be the removal of a branch here and there. On the other hand, if young trees have been summer pruned, as already advised, very little pruning will be required.

Fruit Under Glass.

Late-Keeping Grapes.—Grapes still hanging will require to be very carefully attended to at this time, chiefly in keeping the house properly ventilated and examining the bunches for decayed berries. The cutting and bottling of Grapes must be determined by a number of circumstances, chiefly the nature of the variety and the crop the rods are carrying. As a rule, however, all except Lady Downe's and any other very late Grape can with safety be cut and bottled now. Very often rats play great havoc among late-keeping Grapes still hanging. One rat alone will account for two or three bunches in a night. As a precautionary measure, in addition to trapping, a quantity of Furze may be tied round the rods near the ground.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Carnation Pink Sensation.—The sensational aspect of this handsome Perpetual-flowering variety is most probably reflected in the fine proportions of the flower, in which respect as shown it is far away the largest of its race which has yet seen the light. Wedded to this is that tone of pink which sells. We did not detect any perfume in the variety.

Chrysanthemum Meudon.—This is a variety of the exhibition type, a sort of intermediate between incurving and reflexed. The flower-head is deep, well filled and handsome, the pink petals having a silvery reverse. It is good and distinct. The Carnation and this came from Messrs. W. Wells and Co., Merstham, Redhill.

Chrysanthemum Sir Tony.—A single-flowered sort of moderate size and of intense bronze hue, quite a remarkable shade of colour. The distinctly reflexing or drooping floret tips add character and charm to a particularly pleasing variety. From Mr. W. J. James, Farnham Royal.

Odontoglossum crispum Millee.—This handsome variety is characterised by large size, good form, and pure white flowers of great substance tipped with brown on the lip. It is a very striking and beautiful sort. From Messrs. Flory and Black, Slough.

Sophro-Cattleya November.—The sepals and petals are of rich rosy purple hue, very deep and intense, the scarlet-shaded lip adding fire and light to a very beautiful flower. The latter has a distinctly rounded outline. The plant is very dwarf habited. From J. Gurney Fowler, Esq., Brackenhurst, Pembury, Kent.

All the foregoing were shown before the Royal Horticultural Society on the 17th inst., when the awards were made.

THE EDITOR'S TABLE.

Choice Shrubs from Scotland.—Mr. R. Findlay, Logan Gardens, Stranraer, sends from the open flowers of quite a number of choice shrubs that are usually cultivated in the greenhouse. These include *Eupatorium wienmannianum*, *Cassia corymbosa* and two varieties of *Abutilon*. Mr. Findlay writes: "I enclose a few sprays of various greenhouse shrubs cut from the open garden, showing how well these things grow in our mild climate, and these late-flowering shrubs are so valuable in the garden in autumn. The garden at this date is really wonderful, owing to the long time of bright sunshine we have had. *Eupatorium wienmannianum*, a South American shrub, is generally grown as a cool greenhouse subject for decorating or for furnishing a supply of cut flowers; but in the milder parts of the South-West it flourishes freely in the open. The plants under notice have now been in the open for a number of years, and have not suffered to any extent from frost. They are growing in a slightly shaded position and usually begin flowering about the middle of September, and, providing we escape early frosts, continue to do so during October and the greater part of November. This is a most desirable species, with large corymbs of sweet-scented white flowers produced with the greatest freedom. It is probably hardier than it is generally thought, as I saw a fine plant of this flowering freely on a sunny bank in the grounds of Castle Kennedy, which, Mr. Cruden assured me, had no

protection during winter. Cuttings of young shoots root freely if inserted under a bell-glass in early autumn. A sunny bank sheltered from the north and east, with a rich, well-drained loam, seems to suit this useful late-flowering shrub out of doors."

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

(Continued from page 571.)

FENNEL (*FENICULUM CAPILLACEUM*, GILIBERT).

THE cessation of the supply of the fruits of this species of Fennel from the Continent may tempt farmers to try to grow Fennel in this country. Any crop produced is almost certain to sell well. Fennel likes plenty of sun, and is adapted to dry and stony situations, but yields best on rich soil on the stiff side. From 4½lb. to 5lb. of seed are

correct conditions of shade and moisture. Several times the amount of drug now used would be absorbed for making fluid extract of hydrastis and the alkaloids hydrastine and hydrastinine.

Cultivation.—The native home of Golden Seal is in deep, shady nooks in American forests with rich, deep soil full of natural moisture, but not waterlogged. To imitate natural soil conditions, beds should be double dug in autumn, and plenty of leaf-mould or well-rotted peat manure should be dug in during autumn. A second and similar treatment should follow in spring before planting. The beds may be arranged under natural or artificial shade—either under trees or under lattice work. The object aimed at is to protect plants from the heat of the midday sun, and from heavy rain and drying winds. Beds made in orchards and arranged so that the fruit trees shade them at midday would seem adapted for this purpose. The beds could be sunk several inches if deficient in natural moisture. A 2-inch drain with good fall 15 inches below the surface should prevent water-logging on wet soils. Golden Seal has been successfully grown in the shade of Apple trees near Moscow.



VEGETABLES SHOWN BY MESSRS. SUTTON AND SONS AT THE LAST ROYAL HORTICULTURAL SOCIETY'S SHOW. GROWN FROM SEEDS SOWN SINCE THE OUTBREAK OF WAR.

sown per acre. In the mild climate of France the seed is usually sown in August or September, but spring sowing would be necessary in England. The fruit is heavy, and a crop of 15cwt. per acre would probably be obtained. Cutting should be done before the fruits are fully ripe, as in the case of Dill.

Fennel is largely used for cattle condiments, and Indian or Levant produce will probably be used for these. The usual price for German Fennel is about 35s. per cwt., and an English crop should be grown with good profit at this price. Levant Fennel sells at 25s., and East Indian at 20s. per cwt.

GOLDEN SEAL (*HYDRASTIS CANADENSIS*, L.).

Prospects.—Golden Seal is an American drug, the price of which has risen from 5s. per lb. in 1905 to 20s. or more in September. Such a high price enables cultivation to be practised on a commercial scale both in America and in England, even with the great expense of artificial shading in order to simulate natural conditions. Cultivation of this drug might become a paying proposition to anyone who could solve the problem of the

Golden Seal is propagated by dividing up the rhizomes of old plants in late spring (April or May). These bear prolific lines of dormant buds from end to end of the rhizome, and a living piece containing one of these will grow under suitable conditions. The pieces are planted in rows 6 inches apart with 1 foot between the rows. The plant usually bears a single leaf the first year, and two leaves and a single flower the second year. Golden Seal is a slow but persistent grower under suitable conditions, the time between planting and harvesting being three years. The plants should increase fourfold in two seasons by dividing up the rhizomes. A light mulch of leaves in autumn affords the best protection from frost.

Hydrastis can be grown from fresh seeds, which germinate slowly, but the seedlings do well if they get over the first season in a strong condition. The seeds are sown in fine potting soil and covered lightly. In all transplanting operations the growing beds must not be trodden upon. If artificial shade is necessary, this could be given by slats overhead arranged to turn on edge or lie flat, on the lattice window-blind principle. The initial

difficulty would probably be to obtain a supply of cuttings of the living rhizome.

Yield.—After initial experiments commenced in 1899 on a small plot at Washington, the United States Department of Agriculture gave the production as 5,120 lb. of fresh roots per acre, or 1,500 lb. of marketable roots. In 1912 the Department reported that the cultivation of Golden Seal was "successfully established."

(To be continued.)

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

SOME GOOD MICHAELMAS DAISIES (A. S.).—The undermentioned varieties are among the very best in the sections named, and can be depended upon to produce a splendid display in the autumn: Aster cordifolius section—Aldeboran, Little Boy Blue, Sweet Lavender, Little Bo-Peep, Ideal and White Diana. Aster ericoides section—Perfection, Desire, Hon. Edith Gibbs, Simplicity, Star Shower and Daydream. Aster vimineus section—Freedom, Osprey, Esther, Delight, White Heather and Hon. Vicary Gibbs.

HOW TO HYBRIDISE MICHAELMAS DAISIES (E. H.).—This is very simple, but requires much patience and perseverance to effect any startling novelties, as one must be prepared for a very large majority to be practically worthless. It is contended by many that the various species will not cross. This is not so, as many of the more beautiful varieties now in cultivation have been produced in this way. Immediately the flowers of the varieties it is intended to cross are fully developed, the pollen should be taken from one to the other and some light gauze placed over the flowers to prevent bees interfering with them. The seed should be picked when ripe and sown immediately in light sandy soil, raised in gentle heat, and planted out the following spring.

PLANT FOR WALL GARDEN (F. A. Eyn).—You ask for a plant for this purpose, though the context of your letter rather implies that you are referring to a small "walled-in" garden, which is another matter. For the latter you might plant Spiræas, Liliums candidum, tigrinum, croceum and umbellatum in variety, Phloxes of sorts where the shade is not dense, Solomon's Seal, Foxgloves, Canterbury Bells, Lily of the Valley, Lenten and Christmas Roses, and quite a series of Flag Irises, which alone might with proper treatment prove a signal success. In the shadier parts Ferns, Squills and Primroses would be very charming. If we have wrongly interpreted the meaning of your letter, please write us again. The best time to secure the plumes of Pampas Grass is when they are about three parts matured. Their fleeciness is increased by washing and drying to some extent, though this, together with their form and silveriness, is often much more a question of variety alone. To some extent we believe the plumes are artificially bleached, though we are not acquainted with the exact process.

THE GREENHOUSE.

GRUBS IN BEGONIA TUBER (H. B.).—The larvae are those of the weevil Otiorrhynchus picipes. We recommend you to turn all the plants out of the pots and shake the pest out. It may also be attacking Pelargoniums, Cyclamen and Primulas if you grow them, and these should be attended to in the same way.

ADVICE ON OLEANDERS (E. F. Browne).—One reason why the flowers of the Oleander fail to develop is lack of nourishment at a critical time. They need a liberal quantity of water during the summer months, with frequent applications of weak liquid manure. Another cause that is apt to prevent the flowers opening is that frequently young shoots are pushed out immediately below the head of flower-buds, and if these are not removed they grow away freely at the expense of the buds, which, consequently, make no further headway. You may, if you wish to do so, cut back your plants next March, when, if kept warm and frequently bedewed with the syringe, they will soon start again into growth. As soon as young shoots are pushed forth, the plants may be repotted or given a good top-dressing. Though this treatment would lead to the production of more bushy plants, it is very doubtful if you would get any flowers next season. For the successful cultivation of the Oleander protection from frost is necessary; therefore your plants would not survive the winter outside even if planted in a sheltered spot.

WORKING GREENHOUSE PROFITABLY (P. Tonks).—If you will take advice that is backed by forty years or so of practical nursery training and experience of such questions as that to which your letter refers, it is contained in two words, viz., "Don't dabble." You say you have so many dozens of Carnations and Chrysanthemums, and, of the former, that number of dozens is just that number too many. In other words, you do not want them; they will be in your way. The Chrysanthemums may be all right if the sorts are right, but of that we have no information. If the Tomato is to be your main summer crop, you want that crop early, when prices rule high.

Therefore you require your greenhouse at liberty early, so that there will be no halting between two opinions. In commercial gardening for profit, whether under glass or elsewhere, crops are required to work the one with the other, so that there will be no gaps and no loss of time. You have, as a matter of fact, to keep in mind the well-known adage of "what you lose on the swings you must make up on the roundabouts," and work the crops accordingly. It is, in short, all a question of wheel within wheel, and for the reasons stated Sweet Peas will be in the way of Tomatoes. In so limited a sphere you require a few fixed crops, crops that have definite flowering periods, and which, having finished their function, may be cleared out with impunity. To this end no set of crops would prove so profitable as forced Daffodils and Tulips for the winter, with Tomatoes and Chrysanthemums for succession. The first named would require some outlay and knowledge, and possibly also a little expert professional advice at the outset to put you fairly on your feet. It would, however, be worth doing.

MISCELLANEOUS.

NAMES OF PLANTS.—R. F. C.—Not recognisable in the condition sent; send again next year when developed. —W. Philpotts.—The Strawberry Tree, Arbutus Unedo. Propagated by seeds sown in sand in cold frame in March.

NAMES OF FRUIT.—H. Lester.—Apples: 9, Lord Grosvenor; 10, Mank's Codlin; 15, Striped Beaufin; 19, Kentish Fillbasket; 23, Pickering's Seedling; 24, Nelson's Codlin. Pears: 1, Belle Julie; 3, Durondeau; 4, Doyenné du Comice. —J. P.—1, Glastonbury; 2, Magnate; 3, decayed; 4, Beurré Claircau; 5, Beurré Hardy; 6, Uvedale's St. Germain; 7, Marie Guise; 8, Josephine de Malines; 9, Beurré Sterckman; 10, Durondeau; 11, Beurré Dubuisson; 12, Dana's Hovey. —H. Chapman.—Adam's Pearmain. —East Hants.—1, Bramley's Seedling; 2, American Mother; 3, Hambleton deux Ans.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THE fortnightly meeting held on the 17th inst. was of unusual variety, excellence and interest, the several departments—vegetables, Orchids and flowering plants—being well represented. In the latter the great avenue of Chrysanthemums from Lewisham outclassed everything else, just as did the vegetable collection of Messrs. Sutton at the other extreme in its way. This last, indeed, possessed an importance of its own, at once national and, therefore, far-reaching, as well as of high educational value. It will doubtless remain as an object-lesson for all time. Orchids, if not numerous shown, were full of beauty and variety. Carnations and Violets charmed by their fragrance, and were greatly admired by the large number of visitors. The Orchid committee gave awards of merit to two, and the floral committee to three, novelties.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (Chairman), and Messrs. E. A. Bowles, F. W. Harvey, J. W. Barr, J. Green, W. J. Bear, G. Reuthe, T. Stevenson, C. R. Fielder, C. Blick, J. Hudson, J. F. McLeod, J. Jennings, J. Dickson, A. Turner, J. T. Bennett-Poë, C. E. Pearson, W. P. Thomson, E. H. Jenkins, W. Howe, W. A. Bilney, C. Dixon, W. B. Cranfield and J. W. Moorman.

Messrs. H. B. May and Sons, Edmonton, displayed a table of winter-flowering plants, among which were nice displays of Cyclamen in white, rose and carmine shades, and the newer winter-flowering Begonias. Of these latter, Optima (orange), Mrs. Heal (carmine) and Exquisite were the most important. The Gem (very dwarf, carmine red), Gloire de Lorraine and Glory of Cincinnati (both very charming) were also in this group.

Messrs. Stuart Low and Co., Enfield, also had a charming display of winter-flowering plants, the Begonias bearing that name being prominent. Of these, Exquisite (deep pink and white), Fascination (orange), Mrs. Heal (carmine), Scarlet Beauty, Emita (deep orange) and The Gem were the more important. Cyclamen, Statice profusa and Acacias were also shown. In a separate group a feature was made of winter-flowering Carnations, the huge vases containing such good things as Satin Robe, Philadelphia, Gorgeous, Princess Dagmar (crimson, with fine Clove scent), Mrs. Mackay Edgar (pink), together with Snowstorm and White Perfection (whites).

Messrs. Godfrey and Son, Exmouth, displayed a table of single-flowered Chrysanthemums in variety. Such as Eldorado, Miss Margaret Gildley (bronze), Golden Mensa, Mollie Godfrey (rose amaranth), Audrey (golden), Gold Cup, Cardinal (red) and Market Queen (double, an improved Niveus) were all fine.

Miss Baird, West Malvern, set up a small yet artistically arranged group of Chrysanthemums.

Messrs. Barr and Sons, Covent Garden, W.C., staged a variety of Nerines, also such good hardy flowers as Kniphofia aloides glaucescens, Irises stylosa and alba, Cyclamen neapolitanum, White Hoop-Petticoat Narcissus, Galanthus Elwesii and fine vases of Helleborus altifolius (the latter very fine).

Mr. Charles Blick, Hayes, Kent, showed plants of a capital pink-flowered Perpetual-flowering Carnation named Princess Marie José. It is pleasing in colour and of much refinement.

The Misses Hopkins, Shepperton-on-Thames, had a nice lot of Gentian flowers, together with flowering examples of Hypericum empetrifolium, Primula capitata and Lobelia cardinalis, in a group of hardy alpine flowers.

Mr. G. W. Tyser, Oakfield, Mortimer, had specimen trays of exhibition Chrysanthemums, chiefly of the incurved section. They were a nicely grown lot.

Messrs. Felton and Sons, Harrow Square, exhibited vases of the handsome single-flowered Chrysanthemum Isobel Felton, which is of clear yellow colour. The variety was about six inches across, and of a fine decorative excellence.

Mr. C. Engelmann, Saffron Walden, had a sumptuous lot of Carnations, the vases of Carola, Scarlet Carola, Enchantress Supreme, Fanny (fancy), Champion (scarlet), White Enchantress, White Wonder and Lady Northcliffe being exceptionally fine. Gorgeous was also in good condition.

The Misses Price and Fyfe, Grove Park Nursery, Lee, S.E., displayed some nice vases of Carnations, Mandarin, a yellow-ground fancy, being particularly good. Excellent vases of Chrysanthemums, as Dazzler, Golden King, Snow Queen and R. F. Felton (gold), were very fine.

Messrs. Allwood Brothers, Hayward's Heath, showed splendid vases of Carnations Wivelsfield White, Mary Allwood, Salmon Enchantress, Princess Dagmar (crimson), Philadelphia (pink), Champion (scarlet), Fairmount (heliotrope), Gorgeous, and Bishton Wonder (heliotrope self). Many others were shown in smaller array.

Mr. Clarence Elliott, Stevenage, again showed a quantity of Gentiana acaulis flowers, together with Iris alata and a variety of alpines, of which many were in flower.

Mr. J. Kettle, Corfe Mullen, Dorset, showed Violets in delightful variety. La France, Princess of Wales, Ascania (all of the large-flowered set), Mrs. Arthur, Mrs. Kettle and Mrs. Astor (varying shades of blue in the doubles) were also well represented.

Earl Brownlow, Ashridge, Kent (gardener, Mr. Robertson), sent a display of winter-flowering Begonias, Lady Cooper (deep salmon), Apricot, Clibran's Pink and Scarlet Beauty being the more prominent.

A large group of Chrysanthemums, entirely composed of single-flowered sorts, was staged on the floor opposite the entrance by Messrs. Peed and Sons, West Norwood, S.E. Some of the more distinct were Doreen (golden), Nora Peed (bronze), Phyllis (reddish), Golden Mensa, Stuart Smith (white), Margaret de Quincey (pink), Portia (chestnut red) and Sir Walter Scott (rich yellow).

Mr. L. R. Russell, Richmond, showed a group of berried shrubs, Pernettya, Skimmia, Aucuba, Crataegus and others, in pots, with Cotoneaster, the Strawberry Tree and Hollies.

Messrs. Wills and Segar, South Kensington, had a nice lot of Erica hyemalis rosea and E. nivalis (the latter a mass of pearly bells). Orange trees in fruit were also a feature.

Mr. G. Reuthe, Keston, Kent, had a choice lot of Nerines, of which N. flexuosa alba and N. pudica were very beautiful. Tropaeolum tuberosum was in good condition, also Sternbergia lutea.

Messrs. W. Wells and Co., Limited, Merstham, had Chrysanthemums Merstham Jewel (bronze), Mrs. Loo Thompson (soft yellow), Mary Morris (fine bronze single), W. Rigby (rich yellow) and Queen Mary (both of great size), Commodore (crimson) and Mensa (white).

Messrs. W. Cutbush and Sons, Highgate, N., had choice Carnations in vases, White Swan, Triumph, Sunstar, Lady Ingestre and White Enchantress being the more important.

Messrs. J. Hill and Sons, Barrowfield Nurseries, Edmonton, had a glorious table of Ferns, chiefly in specimen form and admirably grown withal. Among the best was a very fine example of Onychium auratum, of very delicate tracery and beauty. It was, indeed, a charming plant. Polypodium crispum (fine glaucous tone), Davallia tenuifolia Veitchii, Gleichenia semi-vestita, Adiantum scutum, Gleichenia Mendelii, Adiantum trapeziforme, Polypodium irioides ramo-cristatum, Gleichenia longipinnata, Asplenium serra (Brazil) and Davallia ciliata were all imposing specimens and finely grown. Some excellent pieces of Platycerium were also noted in the group, and a nice specimen of the rarely seen Marattia attenuata.

Messrs. H. J. Jones, Limited, Lewisham, S.E., were awarded a gold medal for what in effect was a great avenue of Chrysanthemums, brought into being by table displays arranged at right and left of a spacious gangway. Through this it was possible to promenade and view the flowers at will, and certainly nothing finer of its kind has ever been displayed. Following their well-known style, tall vases and stands 4 feet or so high were employed in the background, each containing a score or so of handsome flowers. In this way some five hundred giant flowers of exhibition standard were utilised, to say nothing of front vases containing single and decorative sorts galore. We have not space to do justice to such an imposing array of the "Queen of Autumn Flowers," and give a few of the best. C. H. Curtis, yellow incurved, appealed by reason of refinement and colour. Bob Pulling is a glorious yellow. Mrs. R. C. Pulling is a yellow Japanese and very large. Lady Grace is white and mauve. Sir William Dunn (crimson) has a gold reverse. Mrs. Bai is a lovely pink Japanese. Mrs. H. Eland (mauve), Miss Archer and Junon (pink) are a trio of Anemone-flowered sorts: while Audrey (yellow), Jessica (golden amber), Buttercup (golden yellow), Excelsior (golden amber) and Arthur Harvey (deep rose pink) are a set of singles calculated, we think, to satisfy everybody.

Mr. Amos Perry, Enfield, again showed hardy Ferns, the group on this occasion being of Polystichums and Scolopendriums, the latter in many of the finest tasselled varieties. All were varieties of S. vulgare, and included grande, latifolium, cristatum, digitatum, grandiceps, with all the more distinct and ornamental of the ramo-cristatum forms and others akin. We welcome these plants for their evergreen qualities as much as for their fine ornament.

THE GARDEN.

No. 2246.—VOL. LXXVIII.

DECEMBER 5, 1914.

NOTES OF THE WEEK.

Honour for a Colchester Firm.—Messrs. R. Wallace and Co. of Kilnfield Gardens, Colchester, have just received the Royal Warrant appointing them Nurserymen and Purveyors of Hardy Alpine and Aquatic Plants to Her Majesty Queen Alexandra.

The Victoria Medal of Honour in Horticulture. It is with pleasure that we learn the Royal Horticultural Society has conferred the Victoria Medal of Honour, instituted to commemorate the glorious reign of Queen Victoria, on the following: Captain W. Stackhouse C. Pinwill, a Cornish amateur who has all his life collected rare plants and has been most liberal in distributing them gratuitously far and near; Mr. Joseph Cheal of Crawley; Mr. Whytock, gardener to the Duke of Buccleuch, Dalkeith; and Mr. William Cuthbertson of Messrs. Dobbie and Co. of Edinburgh.

Mossy Saxifrages in Winter.—Now that the flowers of most of our rock garden plants have departed, the value of those possessing beautiful foliage is fully appreciated. On looking through the rock garden a few days ago we were very pleased with the beautiful green carpets of Mossy Saxifrages, the fresh, verdant tint making a charming contrast to the grey sandstone. *Saxifraga hypnoides* and *S. muscoides*, with several of their varieties, were particularly effective.

Wallflowers in December.—For some time now we have been cutting some fine spikes of Early Paris and Yellow Phoenix Wallflowers. The seeds were sown in April, the seedlings pricked out when large enough, and given no more attention until we started cutting the flowers, which we hope to continue to do for some time yet, or even the winter through, providing the weather is not too severe. At such times this favourite flower is very much appreciated, and we would advise our readers another season to grow some of these varieties.

A Late-Flowering Torch Lily.—During the past few weeks one of the most attractive features in the outdoor garden at Kew has been a large bed of Torch Lilies situated near the Orchid Houses that form part of the famous T range. The variety is *Kniphofia aloides maxima*, and even at the end of November, in spite of several severe frosts experienced a week

or ten days earlier, the handsome red and yellow flower-spikes were in splendid condition. In common with other Torch Lilies, this variety needs light, sandy soil that has been heavily manured.

The Royal Horticultural Society's Lawrence Medal.—We understand that the Lawrence medal, awarded each year by the Royal Horticultural Society for the best gold medal group staged at any of the society's shows during the year, has been awarded to Sir Everard Hambro, K.C.V.O., Hayes Place, Kent (gardener, Mr. Cranfield), for his magnificent group of alpine in pots. All those who have had the pleasure of seeing the alpine from Hayes Place will, we think, agree that this signal honour is fully deserved.

on September 24, and is now a prisoner in Germany. To fill the places of those growers who are fighting, their parents, wives and children have come forward, and are working bravely and without complaint to keep things going. Paris is now wearing a more cheerful aspect. A great many foreigners who left the city during the dark days of August have now returned, and these help to keep business going. We are sure that all our readers will join with us in the earnest wish that fair France and gallant Belgium will soon be cleared of our enemy, and that substantial reparation will be made to them for the damage and misery caused.

Pear Louise Bonne of Jersey.—It is doubtful whether there is a more reliable Pear of really good quality for small or large gardens than the one illustrated on this page. It is an old variety, having been raised in France as long ago as 1780. The fruits, which are in season during October, are of medium size, yellowish green, with a dull red flush on the exposed side. The flesh is white, very juicy and of good flavour. So far as our experience goes, this Pear always crops well, no matter in what form it is grown. We have it in espalier and cordon form, and can always rely on the trees to produce fruits, even when most others fail. Now that fruit trees are being planted, a few at least of this Pear should be included. Quite small trees budded or grafted on the Quince stock will bear fruit.



FRUITS OF PEAR LOUISE BONNE OF JERSEY, AN EXCELLENT OCTOBER VARIETY. TREES SHOULD BE PLANTED NOW.

Paris in War Time.—From a letter received on Saturday last from Comte d'Estienne of Messrs. Vilmorin, Andrieux et Cie we are able to gain some idea of the difficulties under which horticultural business is being conducted in Paris at the present time. Of Messrs. Vilmorin's staff, over 400 out of 700 members had to join the Colours of our Allies as soon as war broke out, and since then many others have also been called up. So far six members of the staff have been killed, twenty wounded and several are missing. Five members of the family, and bearing the name of Vilmorin, are with the French army, and one of them, M. Jean Vilmorin, Lieutenant au 9ème Cuirassiers, was wounded at Peronne

as long ago as 1864, it is seldom that we find it in gardens. It is difficult to understand why, as at the end of November some plants that we have in a sunny border under the dwelling-house were still in full flower. The blossoms are deep red, and remind us somewhat of *Ixias*. When grown outdoors it needs a warm, sunny position and rather light, well-drained but rich soil. In colder districts it needs pot cultivation, with the pots plunged to their rims in ashes in a cold frame throughout late spring, summer and autumn, these being taken to the greenhouse or conservatory to flower during October and November. It is known botanically as *Schizostylis coccinea*, and is easily propagated by division in the spring

The Kaffir Lily.—Although this beautiful little South African plant was sent to this country

CORRESPONDENCE.

(1 Editor is not responsible for the opinions expressed by correspondents.)

Quince Jelly.—The thanks of your readers are due to Mr. E. Molyneux for giving, in your issue for November 7, page 540, the recipe for Quince jelly. Following faithfully the directions there given, we have been successful in making a good quantity of this jelly, which I have no hesitation in saying is the best preserve I have ever tasted, a statement that is endorsed by numerous friends who have tried it. This jelly is bright red and very attractive, and the flavour is quite unique. Thanks to Mr. Molyneux, we now have a use for fruits that in the past have been regarded as of little value.—NEMO.

Autumn - Fruiting Straw-

berries.—Seeing how prolific the large alpine Strawberry is and the length of time it continues to fruit, it is surely wonderful that people so seldom grow it. Here in mid-Oxfordshire we were during the second week in November having dishes of the fruit for dessert, and the fruits nearly all average an inch in length by $1\frac{1}{2}$ inches in circumference. We have never been without a supply of them since June, when, besides those used in the house, we made jam from them. The plants are in a narrow border under a west wall, and as the birds never seem to touch the fruits, they do not require netting.—A. LA T.

Parochetus communis

Flowering Late.—For some reason or other this delightful trailing plant did not flower with us until mid-October, though it ought to have done so in July. Though seldom referred to, it is, nevertheless, strikingly pretty with its clear pale blue flowers, which arise out of the axils of the Shamrock-like leaves. It makes a good rockery plant, but should not be planted where it is hot and dry. Some authorities say it is not absolutely hardy in cold districts, so slight protection should be given; or portions of the plant can be potted up and kept in the cold frame in the winter—an easy matter, seeing it roots at intervals along its stems.—C. T., *Highgate*.

Salvia Fireball.—In your issue of November 14, page 552, I noted a well-merited tribute to this plant. We usually fill a large bed in front of the house with it here, and many passers-by stop to admire it. Such a brilliant bit of colour does it make in the landscape that when travelling on the railway, which runs at a distance of nearly half a mile in front of the house, I have heard folks in the train call one another's attention to the bed. Your correspondent speaks of making a comparison between plants raised from cuttings and those raised from seed. We have tried both

plans here, and, unless I am a false prophet, he will find the comparison—as is indeed the case with most flowering plants—to result immeasurably in favour of seed.—F. HERBERT CHAPMAN, *Rye*.

Pruning Cordon Fruit Trees.—At this busy season one has not much time to indulge in writing, but I cannot let the otherwise excellent article by "A. B. Essex," in your issue for November 28, pass without a remark upon one sentence contained therein: it is, "In the winter these side shoots or stumps are cut to within two buds of their bases. . . . This is the way fruit spurs are made." Forty years' experience in pruning fruit trees leads me to say that, so far from the above being a fact, it is just the way fruit spurs are *not* made, and such close pruning has been the cause of more failures in fruit-growing than

growth will your tree be. In the case of pyramids, in which each branch is (or should be) treated as a cordon, trees hard pruned like this become dense thickets, splendid places for blackbirds to build in, but of little other value. And what thousands there are in this country! Nearly every garden one goes into contains examples, and doubtless this is why a school of advisers has arisen which says, "Don't prune at all; let your trees grow naturally." The general reply to my advice is that spurs thus left are unsightly and the spurs get too far away from the main stem. True; but the time to reduce them is after the lower buds have become fruit buds. These fat fruit buds are easily recognised by any amateur, and when once well developed, any growth beyond may be cut off, as each bud has its own leaves as well as bloom, and needs nothing to draw up sap. I am, of

course, speaking of Pears and Apples. In this way the fruit is kept near the stem, and the trees are not crowded with wood. One word in conclusion: If your trees are vigorous, go one better than the advice given above—pinch to six leaves instead of five, and prune to five buds instead of four.—A. H. PEARSON, *Lowdham, Notts*.

A November - Flowering Plantain Lily.—Flowering during October and November, the Plantain Lily named *Funkia tardiflora* is one of the most valuable plants of the family. The *Funkias* are, as a whole, more or less partial to a little shade and moisture. For the subject of this note, as it blossoms during November, shelter is very desirable, as, though perfectly hardy plants, several degrees of frost, which is naturally more severe in the open, soon spoils the flowers. A western aspect is desirable, to avoid the morning sun reaching the flowers when there is a little frost. A sheltered nook in the rock garden, in the hardy fernery, along the front of the shrubbery border, or planted beneath a bed of deciduous shrubs are all good. At Kew one of the best effects and most successful plantings is



FUNKIA TARDIFLORA, A PLANTAIN LILY THAT FLOWERS OUTDOORS DURING NOVEMBER.

anything else I know of. Bear in mind that this treatment is recommended for young and vigorous trees which are in the course of being formed. For "summer pruning" I should read "summer pinching." Pinch the young side shoots back to five leaves instead of four, while the shoots are young enough to do this easily with the thumb and finger nails; this prevents their getting too strong. Subsequent growths pinch back to two or three leaves beyond the first pinching, and in the autumn prune back to four buds. If this is done, the following season the two upper buds will produce growth, the two lower buds will form bloom bud, and this is how fruit spurs are made. If you prune young trees to two buds, they will both make wood growth, and the more this treatment is carried on, the more densely crowded with

in the Bamboo Garden. This *Funkia*, in common with other members of the family, thrives freely in a rich loamy soil. Increase is readily effected by division of the clumps in March, which is also the best time for replanting. When first introduced it was named *F. lancifolia* var. *tardiflora*, but the plant is now more generally regarded as a distinct species. It has shining dark green leaves 5 inches to 6 inches long, $2\frac{1}{2}$ inches to 3 inches broad in the centre, tapering at both ends. The flowers are a delicate light purple, freely produced on a raceme 8 inches to 12 inches in length, sometimes more, the flowers closely arranged towards the top, thirty to forty or more in a dense raceme. *F. tardiflora* was first introduced to this country in 1895, in which year plants were obtained for Kew from Herr Max Leichtlin.—H. O.

Pear Charles Ernest.—I was interested in your reference to this Pear and the beautiful illustration of a tree in full fruiting condition on page 566, issue November 21. The Pear is all that is claimed for it, and should be largely grown by amateur cultivators. I am growing the tree as a cordon, but intend to let it develop a little beyond the true cordon stage, as it is growing in the open border and not against a wall. Numbers of trees can be grown in a small space if so treated. The foliage of this variety is the most distinct of any that I have seen, being so very glossy, and the fruits, too, are smooth-skinned and shiny.—GEORGE GARNER.

Late-Flowering Rockery Plants.—We had well into November five rockery subjects in particular carrying a sprinkling of flowers, and even now (November 19) there are a few open flowers on some of them. Indeed, one family—the *Oxalis*, species *rosea*—is still covered with buds, which are no longer able to open fully, even when the sun shines on them, owing, of course, to lack of warmth and its short stay. The other subjects are *Erodium cicutarium*, *Chrysogonum virginianum*, *Erigeron mucronatus* and *Wahlenbergia gentianoides*. Of these last four I do not know to which the "palm" should be given for persistent flowering.—C. T., *Ken View Garden, Highgate*.

Autumn Scenes in Cumberland.—When I was recently paying a visit of nearly a week to the beautiful region of Borrowdale in Cumberland, above Derwentwater Lake, nothing was more exquisite in the valleys and glens than the wild Rose trees, covered with their luxurious coral berries, hanging picturesquely in the waysides over the river Derwent on my way from Lodore to the hamlet of Roswath at the foot of Scawfell. The autumnal tints were still marvellously effective on the mountain slopes. Beneath them, in the near distance, gleamed the waters of the silvery lake. Above, on Bowfell, Scawfell, Skiddaw and Silver Craig, glittered through the pure, serenely silent atmosphere great diadems of snow. On the garden walls of many of the cottages in Borrowdale that venerable, fragrant and richly effective Rose *Gloire de Dijon* was still in wondrous bloom. The lovely *Snowberry* was very conspicuous everywhere around The Grange and Lodore, and to me it seemed to attain in those regions an unusual size.—DAVID R. WILLIAMSON.

When to Propagate Carnations.—I am far from doubting Mr. Weston's contention that trade growers find January and February the best time to propagate Perpetual-flowering Carnations. I have read all the books which have appeared on the cultivation of this flower, and know that Mr. Weston is right in saying so. At the same time, gardeners find it better to propagate in advance of the trade grower. Two gardeners have already written to THE GARDEN agreeing with me on this point, and I know several who used to propagate after the New Year who have adopted autumn propagation. I met the owner of a ducal garden at a railway junction not long ago, and while waiting for a train I was told that the gardener, who up to the previous year had struck cuttings late, had for this year also adopted autumn striking. Flowers had not been so abundant as was hoped for; hence the change. This year, owing to the war, our arrangements have got out of joint, and the cuttings could not be got in till much later; and I have no doubt the results will be on the whole less satisfactory than hitherto.—K. P. BROTHERTON.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

THE colours of the flowers have never been richer, nor the latter more refined in every way, than they have this year. I am not solely referring to the large flowers grown specially for exhibition, but to those also for grouping at home and for the supply of cut flowers to place in vases. Although the weather has been damp, foggy and dull, with occasional spells of hot sunshine, there have not been such bad cases of damping of flowers as in some past years. Many of the new varieties possess petals with glossy surfaces, and such resist damp more than those with dull, or what may be termed rough, surfaces. The value of

Late-Flowering Varieties is very great, and amateur cultivators would be acting wisely if they grew more of them in future years and placed their orders for cuttings for next year's plants as soon as possible. Some cultivators have a mistaken idea that the plants may be propagated late in spring, and so secure late flowers of the best quality. Smaller plants bearing nice flowers may be so grown if the shoots are not stopped too late in the summer; but the finest specimens are grown when the cuttings are propagated early. All sucker shoots now appearing on such varieties as *Embleme Poitevine* (yellow), *A. J. Balfour* (pink), *Baldock's Crimson* (scarlet red), *Mme. R. Oberthur* (white), *Nagoya* (deep golden yellow) and *Tuxedo* (orange bronze) should be retained and inserted as cuttings before they get too much drawn up. Thus, a nice batch of young plants will be available instead of spoiled shoots in January.

Composts for Cuttings.—Composts for cuttings of all varieties should be very carefully prepared. The soil so used remains around the roots throughout the season, and it must not only be of a character to induce the free formation of roots, but act as a storehouse for foods given later on. Quite fibreless soils are unsuitable. I like to sift out the fine soil and replace it with good, sweet leaf-soil, retaining the most fibrous portion of the loam only; then add sufficient washed and dried coarse sand to make all porous. Manure at this stage is not needed. The turf should be selected now; it must be that in which all grasses and their roots have perished. Older turf than this should not be used if it can be avoided.

Chrysanthemum Roots.—Directly the flowers have faded or been cut, the stems must be cut down to within a few inches of the soil; quite low down if suckers are plentiful. Then place the pots in an open position in a greenhouse or frame, so that air and the maximum amount of light will reach them. If cuttings are plentiful and in a number of pots, discard some pots to make room for others, and thin out the weaker of the remaining cuttings. This means sturdiness. Where cuttings are scarce, remove a little of the surface soil and replace it with a sandy mixture, place the pots in a warmer house and keep the soil moist. In nearly every case cuttings are induced to grow. With the Editor's permission, in an early issue I will give a list of new varieties suitable for amateurs to grow for exhibition and home use.

AVON.

POTASH MANURES.

HOW TO SUPPLEMENT SUPPLIES.

AT one time, not many years ago, gardeners relied almost entirely upon natural manures to maintain the fertility of their gardens; but with the advent of the motor the horse is fast disappearing, and natural manures are in some districts practically unobtainable. In consequence of this shortage chemical manures are being used more and more extensively year by year. Ready-made fertilisers are supplied by the trade, but some of these are very expensive, and where the gardener has to study economy he prefers to buy the ingredients and make his own mixtures.

No fertiliser is complete without potash, and we have been accustomed to rely upon kainit and sulphate of potash for this. Both of these salts have been obtained from Germany. The German potash deposits near Strassfurt yield a vast supply of kainit, from which sulphate of potash is obtained. Practically all the potash in use for manurial purposes comes from Germany. The writer is not in possession of the latest figures as to the annual yield of these German mines, but in the year 1900 1,158,000 tons of potash salts were used for agricultural and horticultural purposes. It will be seen, therefore, that as we rely almost entirely upon Germany for our potash supply, we are faced with the prospect of a potash famine for this year.

There is, however, one source of supply open to many gardeners, and that is by the careful use of wood-ashes. In the *Journal of the Board of Agriculture* for November, Dr. E. J. Russell contributes a very useful and timely article on wood-ashes as a source of potash. Experiments have been carried out at Rothamsted, and wood-ashes have been proved to be almost equal to kainit. Dr. Russell points out, however, that wood-ashes should not be exposed to rain before digging into the ground. Two samples were analysed both before and after exposure to a slight shower, with the following result:

Percentage of Potash.			
	Sample A.	Sample B.	Mean of A to B.
Ash collected dry	10.7	9.6	10.1
Ash collected after rainy night	5.7	4.4	5.0

It will thus be seen that although only 0.09 inch of rain fell during the night, half the potash was washed out of the ash.

All hedge trimmings and tree prunings should be burned, and the ashes collected as soon as cold and kept in a dry place till they can be used. The early spring, just before sowing, would probably be the best time to apply the ashes, which should be used at the rate of 8lb. to 16lb. per square rod.

A. E. B.

LILY OF THE VALLEY.

RETARDED crowns of Lily of the Valley may be had in flower by the end of the year, providing they are potted and placed in the forcing-pit at once. Only moderate heat should be applied at first, but this may be increased as growth develops, and when the flowers are fully expanded, the plants ought to be removed to a cooler temperature in order to prepare them for house decoration. Neither the roots nor the atmosphere should be permitted to become dry during the forcing period. J. D.

HARDY AZALEAS FOR PRESENT PLANTING.

THE gorgeous colours assumed by the leaves of many of the hardy Azaleas previous to falling call our attention to a group of plants which delighted us earlier in the year by their showy flowers. The genus *Azalea* is not recognised by botanists; it is now placed in the large genus *Rhododendron*. Garden enthusiasts, however, prefer to reserve the name of *Rhododendron* for the evergreen species, and retain *Azalea* for the deciduous kinds. The name signifies very little, and does not affect the usefulness of the shrubs. Azaleas are useful for many purposes; they are equally delightful when planted in beds on a lawn, as at Kew, with all sorts of shades of colour intermixed in dazzling bewilderment, yet no two shades clashing; planted in groups in shrubberies, as is often apparent in our parks; or grouped by the acre in a semi-wild state in thin woodland, as is practised by Sir Edmund Loder at Leonardslee and by other owners of large estates.

Providing the soil is right, Azaleas give little uneasiness regarding culture, but they detest lime or a sour condition of the ground. Peaty, loamy or sandy soil, providing lime is not present, suits them admirably. The only pruning that is required is the removal of the flower-heads as soon as the flowers fade, so that the strength which would have been expended on seed production may go to the building up of the young shoots for next year's flowers.

Though the Azaleas usually grown are the hybrids and garden varieties of a few American and one Japanese species, there are other kinds less frequently met with that are well worth attention, and one of the prettiest is the delightful species *Vaseyii*, a shrub which has been introduced from the mountainous regions of Carolina. The flowers are white, slightly flushed with pink, though there are forms with pink and white flowers. Two rare purple-flowered species are found in the Japanese rhombicum and dilatatum, both of which blossom early in May. The purple-flowered *Rhododendron Rhodora* may be classed with the *Azalea* group—it is exceedingly floriferous and showy; while a quaint Japanese shrub with tiny leaves and rosy purple flowers is found in *R. serpyllifolium*. *R. Schlippenbachii* is a handsome-flowered plant from Manchuria and Japan, but, unfortunately, like other Manchurian shrubs, it commences to grow very early in spring, therefore it frequently falls a victim to late spring frosts; hence its suitability for the milder parts of the country only. The hardier forms of the Indian *Azalea*, particularly those of the *amœnum* class, are very suitable for gardens in the South of England and Ireland, while the variety *Kämpferi*, which is found in the mountainous regions of Japan, is equally desirable and showy.

Turning to the kinds which are more frequently met with, we find that the chief species represented are *arborescens*, *calendulaceum*, *nudiflorum*, *occidentale* and *viscosum* from North America, *sinense*

from China and Japan, and *flavum* from the Caucasus. Of this number *sinense* is most easily obtainable in the typical state, for the others have been crossed so frequently that hybrids are far more common than the types. *Rhododendron sinense* is well known to many people as *Azalea mollis*, and during early spring it is a familiar plant in almost every garden and market, for it is one of the most extensively cultivated of all shrubs for forcing, while its rich-coloured flowers make it a popular subject for room decoration. Grown out of doors it comes into flower rather earlier than the American kinds, and is often in full flower early in May. This sometimes leads to

varieties with large flowers have been raised. Under the name of *Azalea rustica* a number of varieties with double flowers have appeared, of which are showy. Named varieties innumerable may be obtained, which collectively are spoken of as Ghent Azaleas, from the fact that Ghent is a great centre of *Azalea* culture and a great many kinds have been raised there. Ghent or American Azaleas are extremely popular, and are adapted for growing in large beds in the open. If an upright growth is being made, it is advisable to shorten the leading shoots; this will induce the plants to break from the base and so form well-branched and dwarf specimens.

Those who know the Azaleas only from their flowers would do well to pay a visit to some large collection during September or early October, when the leaves show almost as great a variety of colour as the flowers do earlier in the year. At such a time one is apt to say that the Azaleas are worth growing for the sake of their autumn colour alone. D.

THE INCENSE CEDAR.

As an isolated specimen on a lawn there are few more imposing trees than the Incense Cedar, *Libocedrus decurrens*, especially when well grown. Unfortunately, many of the specimens that are to be found in this country are by no means good, the branches being gappy and placed at irregular distances on the trunk. Where, however, the soil is good and rich and, though well drained, fairly retentive of moisture, there is no reason why this handsome tree should not be planted and induced to develop its natural character. Botanically the family is closely related to *Thuja*, and in gardens the species under notice is often known as *Thuja gigantea*. The popular name of Incense Cedar is derived from the incense-like fragrance that is emitted from the wood. The tree illustrated is growing on the lawn in front of Frogmore House at Windsor, and is one of the finest of its kind in this country.

FRUIT NOTES.

Pruning Apples and Pears.—Those who plant fruit trees must not think that the work in connection with them commences and ends with the mere act of placing the roots carefully into the soil; as a matter of fact, the really intelligent operations are then about to start, and it is entirely upon the manner in



A FINE SPECIMEN OF THE INCENSE CEDAR
(LIBOCEDRUS DECURRENS) AT WINDSOR.

its undoing, for a late frost may injure its flowers. The blossoms are various shades of yellow, orange and red. It has been crossed with American kinds with good results. The flowers of this species have not the delicious fragrance of the American kinds. The flowers of *R. viscosum* are extremely sticky and powerfully fragrant. From this reason and the fact of its growing in swampy ground it has acquired the name of Swamp Honeysuckle. The Caucasian species, *R. flavum*, is a yellow-flowered kind which bears strongly scented flowers in May. The blossoms are yellow and larger than those of the American species. Crossed with *calendulaceum*, some fine orange-coloured

which they are carried out that success depends. At the outset, trees that come from the many reputable nurserymen of the country are practically certain to be in excellent condition; the earlier steps of cutting to form a satisfactory foundation will have been taken, and it remains with the purchaser to maintain them in a perfect state. There are many little things that will demand attention from time to time; but the operation of pruning, which has to be done each season, is of outstanding importance, and it is impossible for too much thought and care to be devoted to it.

The Best Time.—It is immaterial what form of Apple or Pear tree may be demanding attention, but there can be no doubt as to the desirability of completing all the cutting before Christmas. One would not go so far as to assert that the work may not be successfully done long after Christmas, but one may safely say that we get the worst of the winter weather in the first and second months of the year, and pruning trees is essentially not one of those tasks that one cares to do when the rain is coming down in torrents or there are 10° to 20° of frost. Indeed, to cut during frosty weather, whenever it may happen to come, is an error, since the frost may, and probably will, get into the heart of the shoot, and it is certain that trouble will follow in a very short period. Apart from all this, the cutting that is carried out in November and December is done when the habits of the different trees are fresh in the mind of the worker, and the natural consequence is that the operation will be far better finished off.

The Object of Pruning.—The primary object in view in the cutting of fruit trees is to increase their fertility, and one of the surest aids to this is to permit the free admission of light to all the buds in the centre as well as on the outer growths. To this end the middle of the tree ought always to be kept open, and whenever it is necessary to reduce a shoot in length, the cut should invariably be to an outer wood-bud—that is to say, to a flat, pointed bud on the outer side of the stem—since the new shoot will grow in the direction in which the bud points. Thus, if we cut to a bud on the inner side of the stem, the resultant shoot will grow inwards and tend to fill up instead of keep open the middle of the tree. Much, of course, depends upon individual circumstances, but, generally speaking, all the principal shoots should stand 18 inches asunder, so as to allow of the perfect development of the leaves, without which it is impossible to secure the finest crops of fruit. Where the growths are crowded, they should not always be cut back a portion of their length; on the contrary, it is usually far better practice to cut them clean out from the point of origination. As a rule, the bulk of the crop will be carried on spurs on the old wood, and the pruner should cut hard back to these in the winter pruning. The summer cutting or pinching makes this operation easier; but whether recourse is had to this system or not, the winter cutting must be close back, or the spurs will extend to such a degree that the results will never be satisfactory. It is, of course, always desirable to allow some extension of new wood, and the amount must necessarily depend upon circumstances. When the tree is being formed we have to cut back the new shoots by one-half or two-thirds of their entire length, but after the foundation is perfectly established the actual length will depend upon the available space and the condition of the tree. In any case, all unripe portions, as judged by the colour of the bark, must be removed, and there will then remain anything from 3 inches to 12 inches of new wood,

according to convenience. In all cases it is essential that the natural habit of the variety shall be considered, as, though the principles are the same, there are deviations from them, and it is those who study the different varieties under their charge who achieve the greatest success in the culture of these valuable hardy fruits.

FRUIT-GROWER.

WINTER SPRAYING OF FRUIT TREES.

Now that all the buds of fruit trees are dormant, the spraying with caustic alkali wash, so frequently recommended, can be successfully carried out. Many fruit-growers prefer to wait until early February, just before the buds begin to burst, but that is a busy season in private gardens, and if the spraying is delayed until then it often means

ROSES IN YORKSHIRE.

THERE is abundant evidence to prove that the cultivation of Roses is becoming increasingly popular with the amateur gardener. Whether a man is able to grow a modest twenty representative trees or is able to launch out into beds of individual varieties and colour schemes involving hundreds of plants, there is a fascination and an incentive to go one better that is peculiar to the Queen of Flowers. Sweet Peas, Carnations and other flowers all have their keen adherents, but there is a sort of freemasonry existing among the thousands of amateur Rose-growers that continually provides interest and pleasure.

Coming from Kent into Yorkshire eight years ago, I was told promptly, though kindly, that



A VIEW IN THE AZALEA GARDEN AT KEW. NOW IS THE TIME TO PLANT THESE SHRUBS.

that it is left undone. In response to a number of enquiries that have reached us during the last few days, we give below the particulars of this wash, which is certainly most effective in cleansing trees of moss, lichens and other extraneous growths, which if left not only prove unsightly, but provide excellent cover for harmful insects. The wash is made as follows: Dissolve 2lb. of caustic soda (98 per cent.) in a gallon of warm soft water, then add to it 1lb. of soft soap or treacle, and after the whole is thoroughly dissolved and mixed, make up to ten gallons with, preferably, soft water.

Owing to its caustic nature, this wash is likely to cause injury to the hands of the user, who should wear some old gloves and also old clothes while spraying the trees. A fine spray, so as to thoroughly wet every portion of the stem and branches, is necessary, and a day when there is little or no wind should be selected for the operation.

It was waste of time to plant Roses which did "only moderately well" at the very best. It has been my pleasure to prove by my own experience since then that it is possible to have quantities of lovely blooms from the end of June until the end of October, and this year as well as last until November has passed. On November 14 I cut good blooms of Lyon, Betty and Richmond. On November 15 we awoke to find a level 4 inches of snow, together with frost, which, I fear, has finished the chances of some forty or fifty fine buds remaining on the trees, that looked as if two or three days of mild weather would open them.

The Best Varieties.—For this district it is obvious that great attention must be paid to the selection of varieties. Unfortunately, it is only by a slow and costly experience that many of us are willing to learn the lessons of horticulture. My imagination pictured a line of standards with large heads filled with bloom, giving the

to the entire garden; but a few severe lessons have taught me to pass on to that section of Rose catalogues devoted to dwarfs and climbers. My garden is situated in the northern suburb of Leeds, some three miles from the city, and a more exposed situation can hardly exist. Short of rooming in the entire garden, it is impossible to do more than check the strong winds from north-east, north-west and, last but not least, south-west. Therefore it is not unreasonable to suppose that varieties that do well with me could not fail to be a success elsewhere. In selecting Roses for this district, there is a broad general rule (which, however, has its notable exceptions). The two types of Roses that have given me the best results are, first, the class that is composed of comparatively few petals and is of a rather loose character in the bloom, as, for instance, Edu Meyer or Betty; and, secondly, the Pernetiana type, as represented by Lyon, Willowmere and others. While these are generalities that admit of some latitude, they should by no means be forgotten by the man who is making up his annual list.

VIGOROUS RED ROSES.

One of the Roses that should be in every first dozen is

Gruss an Teplitz, a brilliant crimson that blooms continuously in clusters, having dark foliage and extra strong growth. In one season it will go up to 7 feet or 8 feet, and this is by no means the record in height. To get the best results it should be pruned sparingly. Although so free, it is at the same time decorative. It looks nice pegged down, but I prefer to grow it as a background, against which some of the more refined varieties appear to advantage.

Lieutenant Chaire (H.T.).—Colour, rich velvety crimson. This has done particularly well with me. It produces large blooms—with deep petals and fine cupped form—in abundance, coupled with a sturdy growth. I have no Rose that holds its head up better, and it seems able to resist wind and wet above the average.

Hugh Dickson (H.P.).—Colour, intense brilliant crimson. This cannot be omitted, because of its reliability. It appears to succeed best when allowed to climb, and its colour and fragrance have earned for it a wide popularity. Under this heading must also be included

J. B. Clark (H.T.).—Colour, scarlet, shaded blackish crimson. A most vigorous grower, producing abundance of bloom. This and Hugh Dickson used against a trellised fence or pergola, alternated with Dorothy Perkins, makes a pleasing and effective combination.

Richmond (H.T.).—Colour, bright scarlet. It is very free, and with me a better grower than Liberty. It is a charming button-hole Rose. I have just planted Dora Van Tets, which is claimed

to supersede Richmond, but I have not seen it in bloom in this district.

Gloire de Chedane Guinoisseau (H.P.).—Colour, brilliant red, and the recognised counterpart of Frau Karl Druschki, but exquisitely perfumed. I wish it were not such a shy bloomer, as the few flowers that have appeared have been of perfect form and colour. It is undoubtedly an exhibitor's Rose.

Roundhay.

E. WATERS.

(To be continued.)

THE BANKSIAN ROSES.

HOW TO MAKE THEM FLOWER.

To the enthusiastic amateur cultivator of Roses there is a good deal of fascination about the white

plants which have flowered well have been those growing in gardens where they received practically no attention beyond an occasional thinning out of some old wood or the curtailment of too venturesome shoots. The soil in which these successful Banksians are growing varies considerably, ranging from fairly stiff clay to almost gravel. The aspect has either been south, south-west or west. Can the secret of success be in letting the plants well alone, or is it more to do with aspect? As THE GARDEN has always taken a foremost place in the advancement of the Rose, it would be interesting and exceedingly useful if other readers would send the Editor their experiences with these fascinating but, alas! to many, elusive Roses. By so doing, they will render many fellow amateur, and possibly some professional, rosarians valuable assistance.

A. B. ESSEX.

ROSE-GROWING IN TOWN GARDENS.

THOSE who are planting new beds with Roses should have the positions prepared as long as possible in advance, for the soil will have

been raised considerably in trenching, and a month is not too much time to allow for it to settle again. Where a bed has had to be hurriedly prepared, it may be made firm by treading, but this is only safe when the soil is moderately dry. Trees that have been put into unsettled soil are liable to be "hung"—that is, subsidence takes place beneath them, leaving them suspended over a hollow by their roots—and if this is not immediately corrected, harm will result. For this reason it is advisable to go over all new beds within a week or two after planting, and carefully tread down the soil, making sure that each tree is firmly planted. When fresh plants are added to existing beds to replace others that have failed, the soil should be taken out all round as far as possible without disturbing the roots of the Roses adjoining. The hole made should be about one foot in depth, and this should be half filled with



BANKSIAN ROSES SURROUNDING A DWELLING-HOUSE WINDOW. MANY AMATEURS EXPERIENCE DIFFICULTY IN GROWING THESE.

and yellow Banksian Roses, those green, glossy-leaved ramblers that, even though they may be induced to grow luxuriantly, refuse in many instances to produce their flowers. The reason for this has been attributed to numerous causes, such as unsuitable positions, incorrect pruning and bad soil; but a careful consideration of the circumstances surrounding a number of plants that have come under my immediate notice will hardly place the whole blame on any of these. For some years past I have been acquainted with a number of white and yellow Banksian Roses, some of which flower profusely every year, and others refuse to produce more than an occasional truss or two of blooms. Invariably I have found that the

well-rotted manure and soil in equal proportions, well mixed, with a sprinkling of bone-meal. This should be covered with 2 inches of fine soil, and the whole made quite firm before proceeding to plant the new tree.

In forming pergolas or putting up arches, a little extra trouble at first will save a great deal later on. The wood used should be stripped of bark and made rot-proof by painting with carbolineum or some other protective substance. Oak is best for the purpose, and is so much more lasting than other woods that the extra cost is more than justified. Larch and Sweet Chestnut will, however, take a long time to decay if carefully treated, but Birch and other soft woods rot very quickly.

The parts of the poles which will decay first will be those at the earth level, so that an extra coating of the preparation should be given there. The supports thus treated should be exposed to the air at least a month before being used, or, if put into the ground, defer planting for that amount of time. Those who wish to make their pergolas as permanent as possible should set each pillar in a small bed or collar of concrete built up a few inches above the level of the bed. P. L. GODDARD.

SOME INTERESTING GREENHOUSE PLANTS.

COMMONLY known as Carrion Plants, the members of the genus *Stapelia* have long found favour among lovers of succulent plants on account of their curious and often very beautiful flowers, and the ease with which many of the species may be cultivated. The plants are widely distributed in many parts of tropical and subtropical South Africa, and there are a large number of species. Most of these are local in their distribution and vary considerably in size, shape and colour of the flowers, stems and leaves. Although widely separated, botanically, from the Cactus family, they all have a curious Cactus-like habit and appearance, and thrive under similar cultural conditions. The flowers of most of the species are star-shaped, the tips of the petals being often reflexed, while in a rare and distinct section of the genus the flowers are large and bell-shaped, the colours being usually some shade of dark chocolate, red, brown or yellow, the ground colour being often prettily veined or marbled with yellow or creamy white. In nearly all the species the inner parts of the flowers are more or less hairy, sometimes densely so.

Although the majority of the species are somewhat shy in the production of flowers, a few, such as *S. rufescens*, *S. variegata* and its numerous varieties, *S. picta*, *S. mutabilis* and *S. grandiflora*, are the reverse and flower freely on established specimens. Some of the tropical kinds have very large flowers, those of *S. gigantea* being 12 inches to 14 inches in diameter; in others, like *S. Plantii* and *S. grandiflora*, they are 5 inches to 6 inches across. In the bulk of the species, however, especially those commonly met with in cultivation, the flowers are from 1 inch to 3 inches in diameter, these being for the most part species which require the conditions of an ordinary greenhouse, the tropical kinds being rarely cultivated except in botanical gardens and large collections formed by amateurs.

The flowers of practically all the species emit a strong and foetid odour on first opening, and in some kinds this closely resembles that of tainted meat and proves an irresistible attraction to large numbers of flies, especially the blue-bottle and house-fly. It is evident that these are deceived

by the odour into the belief that the flower will in some way provide a suitable food for the rearing of their young, for they cover the surface of the flower with numerous eggs, and the grubs that hatch from these may be seen wriggling about among the hairs and inner parts of the flower, sometimes for several days before they die. The flowers of most of the species last for about four days from the time they expand; a few species last for several days longer, but they are the exception rather than the rule. Weather conditions have a considerable effect upon their lasting properties, flowers which open during a spell of dull weather often lasting double the normal period.

Under natural conditions pollination is effected by dung-flies, and the flowers have adapted themselves in a curious way both in their structure and by emitting an odour for attracting these particular flies for ensuring cross-pollination. What the flies obtain for their trouble it is hard to say. In the whole genus the flowers

lime should be added to the soil, as they are all natives of districts and soils free from this constituent. The pans or pots in which they are grown should only contain from 1½ inches to 2 inches of this compost, the rest being filled up with good drainage material. During the growing period the plants require as much water at the roots as a *Geranium*, but, after growth has finished, the soil should only be kept slightly moist; water sparingly during the winter, but do not allow them to become so dry as to cause their succulent stems to shrivel. The atmospheric moisture should also be kept down to a minimum during this period, but air ought to be admitted to the house on all possible occasions. C. P. R.

GOOD EFFECTS WITH MIXED PLANTS.

Now that the planting of Roses, herbaceous perennials and other flowers is being done, it should



A CHARMING GARDEN SCENE CREATED BY PLANTING HERBACEOUS FLOWERS IN FRONT OF RAMBLER ROSES.

attract only to destroy, receiving the services of the fly as an agent to ensure cross-pollination, and, in return, killing—indirectly, it is true—large numbers of the young of its benefactor.

To the amateur of small means the *Stapelias* are eminently fitted for supplying a very interesting and strikingly beautiful class of plants of easy culture, and they are of additional interest, as a large number of plants can be readily accommodated in a small sunny greenhouse, as they are mostly of a dwarf, compact habit. It is surprising what a small amount of attention they will thrive under. The majority of the kinds are greenhouse plants, only a few of the cultivated species requiring tropical conditions. They may all be grown in a mixture of loam and a liberal addition of sand or broken brick rubbish. No

be remembered that often very pretty effects can be obtained by grouping one in close proximity to the other. A charming picture of this kind is shown in the accompanying illustration, where Rambler Roses, scrambling over an irregular fence, provide a pleasing background to the stately Delphiniums and the more lowly herbaceous plants grouped in the foreground. It is little pictures of this kind that add so much to the interest and beauty of our outdoor gardens, and the clever planter will seize every opportunity to bring them into being. Flowers of light colour, and also white, are greatly improved by having a dark background of evergreens. One of the most pleasing effects of this kind that we remember as a large bed of white Japanese Anemone planted in front of a dense bank of Yews and Hollies.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Early Melons.—If ripe Melons are desired by the first day of May, a sowing must be made now in order to have good, strong plants ready to put out by the first week in February. The seeds should be sown singly in small pots and placed in a bottom-heat of 80°. The bed for this purpose ought to be made up to within a foot of the roof glass in a warm forcing-house. When the young plants are well through the soil, they may be given support by placing a small twig to each and securing it by means of thin matting. As soon as the roots reach the edge of the pots, the plants should be carefully potted into 3-inch pots and kept quite near the roof glass in order to keep them stocky. The soil may consist of loam and leaf-soil in equal parts. Eminence and Hero of Lockinge are good varieties for this sowing.

Early Pot Vines.—If these were started in the first week of November, the buds will soon be bursting into growth, and at this stage the temperature of the house may be raised to 65° at night. When the buds have burst freely from top to bottom of the Vines, the shoots should be carefully tied to the trellis, and after a few days disbudding may be commenced, as it is a mistake to leave more shoots than are necessary to cover the trellis, or to leave more bunches than the Vines are capable of bringing to maturity. Watering must be carefully attended to, and, each time this is applied, sufficient must be given to moisten the whole of the soil. While it is necessary to maintain a moist atmosphere, steam should be avoided.

Plants Under Glass.

Cinerarias.—These plants will require very careful attention with regard to fumigation, which should take place on the first appearance of insects. If once allowed to become crippled by these pests, no amount of care afterwards can restore them to their natural beauty. A temperature of 50° is quite high enough, and frequent applications of manure-water ought to be given. Soot-water may also be applied with advantage.

Chinese Primulas.—The most forward batch of plants should now be placed in the show-house and as near the glass as possible. Very careful watering will be necessary during dull weather. The atmosphere must also be kept moderately dry. Succession plants in heated pits will benefit by a dressing of artificial manure, which may be lightly pricked into the surface soil previous to watering the plants with clear soft water; 50° at night is quite high enough for these plants.

Early Potted Bulbs will now be well furnished with roots, and may be moved into heat as it becomes necessary; but this must not be attempted until the plants have made some top growth as well as plenty of roots. Maintain a moist atmosphere and avoid a high temperature until the plants are well on the move.

The Flower Garden.

Lawns.—Where the lawn is brown and patchy, a dressing of basic slag should be applied now. As this is one of the least soluble manures, it requires to be applied in the early winter in order to get the full benefit during the following summer, and for this purpose the finest powdered sample should be selected.

The Rock Garden.—Many of the subjects will benefit by a surface-dressing as a protection from sharp frost or heavy and continual rain. The dressing may be placed so as to cast off the heavy rain as well as protect the roots from frost. The plants must be kept quite free from fallen leaves, which have a choking effect on their constitution, as well as forming a shelter for slugs and other pests.

Sweet Peas that are required for planting in March must be sown in small pots at once. Place the pots in a cold brick pit and keep a sharp lookout for mice, which may do a great deal of damage in a little time. About three seeds should be placed in a 4-inch pot. The soil may consist of three parts sandy loam and one part leaf-soil. Crock the pots carefully. The pit may be kept

closed for a time, but, as soon as the young plants appear, ventilation should be freely given. These late sown plants are a useful addition to those sown in October.

The Hardy Fruit Garden.

Fig Trees on Walls.—Some protection must be provided for these trees before sharp frost sets in. The branches should be liberated from the wall and all worthless shoots removed, after which the remainder ought to be carefully tied together and a covering of some dry material placed over them. This should be allowed to remain while sharp frost continues, but no great quantity of covering should be left on the trees after the frost is over, or the first crop of fruit will suffer in consequence. The final pruning of the trees should not take place until the branches are tied up in March.

The Kitchen Garden.

Celery.—The latest batch of Celery must receive the final earthing-up at once, but it is necessary to exercise a great deal of care to keep the plants quite free from soil in the centre, or many of them will be deformed and of little value for other than cooking purposes. If sharp frost sets in, the beds should receive some protection. Either clean straw or dry Bracken will do.

Cauliflower Plants in Pits.—These plants ought to be potted into 4-inch pots with as little delay as possible. The earliest batch will now be rooting freely, and must be kept in a well-ventilated pit. Do not allow the plants to become stunted for want of a little manure-water. The aim of the cultivator should be to keep them as stocky and short-jointed as possible.

French Beans in Pots.—Water freely with liquid manure and admit fresh air whenever the external conditions permit.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Onions.—On wet days opportunity should be taken to turn over the stock of Onions, as, no matter how carefully they have been harvested and stored, there is sure to be a few damping. If possible, give them a little more floor space.

Cabbage.—During the remarkably open weather experienced in November, weeds have grown alarmingly, and every encouragement ought to be given to the autumn-planted Cabbages by running the hoe between the rows to stir up the soil. This can only be done when the weather is fairly dry. No attempt must be made to hasten the growth at this time, by the use of fertilisers. These should only be applied when growth commences in the early part of the year.

Parsley.—So far there has been no difficulty in obtaining supplies from the open borders, and where this has not been checked by severe frosts it will be advisable to have it protected in some way. A simple method is to secure some Ash suckers and bend these over the rows hoop fashion at intervals, and over these ordinary sacks or garden mats can be laid on the approach of frost or snow. This method I have found to be very effective. Plants that are growing in frames should be given abundance of air, except during very severe weather.

Tomatoes.—The plants intended for an early spring supply of fruit ought now to receive their final potting. In doing so, just use sufficient soil to cover the ball, leaving room for top-dressing from time to time. These plants should occupy a position near the glass in a temperature not exceeding 55°. Water must be given with caution; indeed, if the soil was moderately moist when potting, no water will be required for a time.

The Flower Garden.

Planting.—The planting of all trees and shrubs should be proceeded with on all favourable occasions, especially when large specimens are to be transplanted. The transplanting of Hollies and Bamboos, however, must be deferred till at least the month of May, and in some districts even as late as June.

Roses.—Where a large number of wall and pillar Roses are grown, the work of cutting out some of the old shoots may be proceeded with. This will save time during the busy spring season. In the case of Crimson Ramblers it will be advisable to leave rather more shoots than are required to furnish the pillar, as, owing to the softness of the wood, many may yet be destroyed by frost. Planting must also be proceeded with when weather conditions permit. Although it is difficult to get the soil sufficiently dry at this season, planks can be used to stand on, which will lessen the effect of binding the soil.

Dahlia Tubers.—On the approach of severe weather these tubers should be carefully examined, and if the slightest sign of damping is seen, an additional covering ought to be given. I find there is nothing better for keeping the tubers sound than some sifted soil or sand worked in among them.

Plants Under Glass.

Gardenias.—To prolong the flowering season of this fine stove plant, a batch of cuttings inserted now should come into bloom early next autumn. Place these cuttings in a propagating-case where a good bottom-heat can be kept up. Older plants must not be subjected to an excessive dry heat, which encourages mealy bug, an insect that is particularly partial to Gardenias.

Clivias.—A few plants that have been standing in rather cool quarters may now be placed in a warm house, where they will soon throw up their flower-spikes. These will be especially welcome about the New Year as a change from Chrysanthemums. To increase the stock, a few of the older plants should be broken up; but as the roots will be found to be matted together, the work of dividing will be no easy task. Place the young plants in a heated house and water sparingly for a time.

Roses.—A batch of pot Roses should now be prepared for forcing, afterwards standing them in a light, airy house and bringing them on very gradually. Indeed, unless the weather is unusually cold, little or no fire-heat will be required for a time. If the plants have not already been pruned as previously advised, this must be done before placing them inside. The drainage should be examined and the pots thoroughly washed. All these details tend to a healthy growth.

Carnations.—To keep up a supply of blooms at this season of the year is no easy task, and, to avoid damping of the blooms, a little more artificial heat ought to be given, together with careful ventilation. To encourage the growth of strong stems, it will be necessary to reduce the flower-buds to one on each stem.

Lily of the Valley.—To have a supply of flowers for Christmas from retarded crowns, the forcing must commence at once. On no account place them in excessive heat at the start; rather should the forcing be gentle until the growth is fairly well advanced. For furnishing purposes the aim should be to have well-developed foliage, which will the better show the flowers to advantage.

The Hardy Fruit Garden.

Morello Cherries.—The nailing and training of these Cherries is a long and tedious job, and no opportunity must be lost in pushing this work forward when the weather is at all favourable. Some of the older trees should be completely overhauled by cutting away old and useless shoots, retaining only those that are young and fruitful. When the work of training is completed, some turfy loam and well-rotted manure ought to be lightly forked in round the tree, or, if this is not possible, a top-dressing of the same material will answer the purpose as well.

Fruit Under Glass.

Peaches.—The forcing of permanently planted Peaches is a task that requires to be very carefully performed, especially in the earlier stages of growth. Trees that have been forced for a number of years may safely be started now. The house should be closed down, and, unless the weather is more severe, no fire-heat ought to be given for at least a fortnight; indeed, a high temperature should at all times be avoided. If the border is at all dry, only tepid water ought to be given; but if the border was attended to in the autumn, no water should be required.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hoptoun Gardens, South Queensferry, N.B.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

(Continued from page 582.)

HENBANE (HYOSCYAMUS NIGER, L.).

Prospects.—This biennial is cultivated in this country for extract making. There is a limited demand for this purpose, and the established drug farms will probably be able to meet it. The official Henbane leaves of the British Pharmacopœia are the leaves and flowering tops of second year plants of biennial Henbane, but the dry commercial leaves imported from Germany and Russia are derived from the wild annual. The plant might be grown next year to make good any shortage, if good germinable seed can be obtained. There will be a demand for dry leaves at enhanced prices next year

The normal price of the Continental drug plant is 40s. to 45s. per cwt. The English-grown plant is ordinarily worth 3s. to 6s. per lb.

Cultivation.—Henbane grows in similar situations to Belladonna, and its cultivation is much the same. The seeds, however, are prone to lie dormant, and the crop is tricky and uncertain, sometimes dying in patches. Commercial Henbane seed is often kiln-dried and useless for sowing. The annual variety is smaller and does not branch so freely as the biennial plant, so that it may be sown in rows 18 inches apart, and the biennial 2 feet to 2½ feet. The leaves (flowering tops) are gathered when the plants are in flower (biennial, June or July; annual, August). The root is not used in medicine. The fresh leaves lose 80 per cent. of their weight on drying.

"EGYPTIAN HENBANE" (DATURA METEL, L.).

This plant is a valuable source of the mydriatic alkaloids hyoscyne, hyoscyamine and atropine. It may perhaps be grown in the same way as Thorn Apple.

OPIUM POPPY (PAPAVER SOMNIFERUM, L.).

Prospects.—The white variety of the Opium Poppy is still grown in several parts of the country, notably Lincolnshire, for the sake of its capsular fruits. The crop is always a precarious one, but there is a steady market for Poppy heads. Belgium usually supplies a proportion of the Poppy heads used in this country, but not sufficient for the loss of her crop to cause serious shortage next year. The price paid for Poppy heads is 12s. to 15s. per 1,000 for large size, and 8s. to 10s. for medium.

Cultivation.—Poppies prefer rich, moist soil with plenty of sun, and the usual practice is to take a crop after Wheat, Oats or Barley. The land is manured and ploughed in autumn to ensure a fine tilth in spring. Sowing is done at the end of March or in April, according to weather, allowing 1lb. of seed per acre and drilling in rows a foot apart. The whitest seeds are preferred. Plants which are too forward are liable to be cut down by late frosts, while, if seed is sown too late, the seedlings may become dwarfed if dry weather sets in before they become well established. A light roller is sufficient to ensure the seeds being covered.

When the plants are 3 inches or 4 inches high they are cut with a hoe into clumps

about 6 inches to 9 inches apart, and are afterwards "singled" by women or children, leaving a solitary strong plant from each group. Weeding is necessary. A dressing of soot or fertiliser may be given if support appears to be needed.

Poppy heads of pale colour are most desired, but a week's rain or even a few nights' heavy dew may spoil the colour of the ripening fruits. High winds and heavy rains are dreaded, as the plants become top-heavy. The capsules are harvested by women or children about September; they are broken off and placed in baskets, and are transferred to sacks to be conveyed to the drying floor. The yield is very variable. The drying floor is a boarded floor in a freely ventilated warehouse, and on it a thin layer of capsules is turned each day by shuffling the feet along the floor. The capsules usually take a fortnight to dry.

THORN APPLE (DATURA STRAMONIUM, L.).

Prospects.—The Thorn Apple is not grown on a commercial scale in this country. The principal use of the drug is as an ingredient in burning powders for asthma, considerable quantities of the wild leaves being imported from Germany and Hungary. The normal price of foreign Stramonium leaves is about 40s. per cwt., but 80s. has been asked since the outbreak of war. The seed is also a commercial article, but demand is very limited. The plant is an annual and easily

grown. The dry leaves would find a ready market next year.

Cultivation.—The seeds (10lb. to 15lb. 1 acre) are drilled in rows 2 feet apart. The plants grow well in sunny situations. The crop is cut with the sickle when in flower in late summer. The leaves are stripped off and dried as quickly as possible, usually by artificial heat. About thirty-four parts of dry leaves are produced from 100 parts of fresh leaves. The thorny capsules are gathered from plants allowed to stand, when full grown but still slightly green. They split and shed their seed on drying.

Datura Tatula, L.—A closely allied species with purple flowers (not white as in *D. Stramonium*) is occasionally used in medicine in place of *D. Stramonium*.

VALERIAN (VALERIANA OFFICINALIS, L.).

Prospects.—Valerian is common in England in moist situations. Most of the drug plant of commerce consists of rhizomes from plants grown in Derbyshire, or imported from Holland, Germany and France. The foreign root was selling in January at 30s. per cwt., English being worth 1s. to 1s. 3d. per lb., about four times that price. Very little Valerian is now cultivated in this country, and great scarcity already exists. Abnormal prices will be paid for some time to come.

(To be continued.)

EARLY FLOWERING CHRYSANTHEMUMS.

THE sub-committee of the floral committee of the Royal Horticultural Society met at Wisley on September 25 and October 16 and made the following recommendations for awards, which were confirmed by the floral committee and approved by the President and Council on October 20:

Numbers.	Name of Variety.	Sent by	Results in previous year.			Award now recommended.
			Date.	Sender.	Award.	
165, 501	Almirante	Jones, Wells				
39, 138, 529	Champ d'Or	Barr, Jones, Wells				
497	Evelyn	Wells and Co.				
31, 93, 296, 536	Fée Parisienne	Barr, Dobbie, Jones, Wells				
56	*F. Wilson	Simpson				
329, 483	J. Bannister	Jones, Wells				
496	Jimmie	Wells				
250, 472	Lorraine	Jones, Wells				
162	Martin Peed	Jones				
75, 300, 485	†Mrs. J. Fielding	Dobbie, Jones, Wells				
274, 513	†Goacher's Terra Cotta	Jones, Wells				
527	Mabel Roberts	Wells				
88, 252, 517	Mrs. W. Sydenham	Dobbie, Jones, Wells				
58, 538	Pluie d'Argent	R. Veitch, Wells				
19, 106, 309, 444	Roi des Blancs	Barr, Dobbie, Jones, Wells				
52, 208	R. Pemberton	Barr, Jones				
102	Stella	Dobbie				
127, 432	Tonkin	Dobbie, Wells				
74, 158	Caledonia	Dobbie, Jones				
65, 537	Abercorn Beauty	Dobbie, Wells	15-9-10	Dobbie	A.M.	Previous aw'd confirmed
82, 427	Bronze Goacher	R. Veitch, Wells	24-10-11	Wells		
95, 160, 497, 525	Carrie	Dobbie, Jones, Wells and Co., Wells	23-9-02	Wells		
71, 181, 514	Crimson Polly	Dobbie, Jones, Wells	10-9-10	Wells		
24, 66, 132	Diana	Barr, Dobbie, Jones	29-9-10	Dobbie, Wells		
62, 344	George Bowness	Dobbie, Jones	12-9-05	Wells		
23, 81, 343, 482	Harrie	Barr, Dobbie, Jones, Wells	12-9-05	Wells		
35, 105, 313, 434	Leslie	Barr, Dobbie, Jones, Wells	14-9-09	Wells		
36, 87, 280, 551	Mme. Marie Massé	Barr, Dobbie, Jones, Wells	9-8-98	Haywood		
28, 85, 512	Market White	Barr, Dobbie, Wells	29-9-10	Dobbie		
100, 287, 474	Nina Blick	Dobbie, Jones, Wells	15-9-10	Dobbie		
22, 276, 433	Perle Chatillonnaise	Barr, Jones, Wells	29-9-10	Dobbie		
13, 84, 292, 455	Polly	Barr, Dobbie, Jones, Wells	29-9-10	Dobbie		
108, 471	Ethel	Dobbie, Wells	11-9-06	Wells		
116, 560	Wells' Scarlet	Dobbie, Wells	25-10-10	Wells		
594	A. Barnham	Wells		No previous award		Highly commended
163	Brighton	Jones				
20, 259, 422	Crimson Diana	Dobbie, Jones, Wells				
111, 337	Ernest Ballet	Dobbie, Jones				
224	*E. Lamborn	Jones				
114	†Fleur Rouge	Dobbie				
246	Gascoigne	Jones				
469	Mme. Drouard	Wells and Co.				
499	May	Jones				
9, 272, 428	Minnie Carpenter	Barr, Jones, Wells				
120, 241	Miss B. Miller	Dobbie, Jones				
406	Nellie Riding	Wells				

* Raised by F. Wilson (other raisers and introducers not stated). † Synonymous. ‡ Synonymous.

ANSWERS TO CORRESPONDENTS.

TREES AND SHRUBS.

MOVING LARGE BOX PLANTS (C. E. M.).—The Box plants which you propose to move to fill up your hedge ought to transplant quite well, providing ordinary care is exercised in their removal. If you are not in a hurry to fill the gap, it would be advisable to leave the work until April: then remove the plants with as much soil attached to the roots as possible. Keep the plants well watered next year, and give the roots a surface-dressing of leaves and manure in the event of dry weather being experienced.

VALUE OF ARAUCARIA WOOD (Mrs. F. E. R.).—The timber of *Araucaria imbricata* (Monkey Puzzle) is useful in its native country, but it has no special commercial value here on account of the limited supply. Trees of this description are often sold at the price of firewood. At the most it is doubtful whether such a tree would realise more than sixpence a cubic foot, for, in addition to there being no regular supply of the timber, the wood from ornamental trees is usually very knotty. You could have it cut up for home use, for it would do for general indoor finishing of houses or outhouses, fencing or other uses for which ordinary deal is employed. It is probable that if the tree were grown for timber under sylvicultural conditions in this country, some considerable use would be found for the timber.

KITCHEN GARDEN.

TO PLANT A SMALL VEGETABLE GARDEN (B. A.).—You do not say what sort of land it is which you are going to make into a vegetable garden, whether the soil is heavy or light, shallow or deep, whether it has been cultivated before or not. Had you given us a few particulars such as these, we could possibly have rendered you a better service. After forming your walks, trench the ground at least 2½ feet deep, and if there are any coarse weeds or grass on the surface, bury it in the bottom of the trench. Apply at least half a cartload of rotted farmyard manure to each rod or perch of land, mixing it with the soil as trenching proceeds. Plant bush or pyramid Apple and Pear trees on either side of the walks all round the garden, at distances apart of 10 feet and 4 feet away from the walks. Plant a Currant and a Gooseberry bush between the trees. Border No. 1 plant with Strawberries and Raspberries. Border No. 2 plant with Loganberries. Borders No. 3 and 4 devote to early crops of Potatoes, Cabbages, Peas, Lettuce, Cauliflower and Turnips. Quarter No. 1 devote to Potatoes. Quarter No. 2 devote to later Peas, Cauliflower, Carrots, Parsnips, Beetroot, Celery, Onions, Brussels Sprouts, Broccoli and winter greens generally. Plant Cabbage, winter Lettuce, and autumn-sown Onions now. Seakale (root cuttings) can also be planted now. Now is a good time to plant all the fruit trees. If you will let us know how many trees of each sort you propose to buy, we will give you the names of the best sorts.

FRUIT GARDEN.

APPLE FOR INSPECTION (Miss I. R.).—The Apple is affected with the trouble known as bitter-pit. This disease is of physiological origin, not due to any parasite, and appears to depend a great deal on the weather. We think it is connected with failure of the water supply at a critical period of growth, and recommend you to see that the water supply is regular and sufficient.

MISCELLANEOUS.

CLOVER IN GRASS (Enquirer).—The best means of destroying Clover in grass is to encourage the grass by giving suitable manures so that it will outgrow the Clover. Try a dressing of superphosphate and nitrate of soda or sulphate of ammonia at the rate of 3lb. of superphosphate to 1lb. of nitrate or sulphate of ammonia per rod. Apply the manure evenly during moist but not very wet weather.

TREATMENT OF TENNIS LAWN (Mrs. A. A.).—The fault of your tennis lawn is that it was originally laid either on ground full of weed seeds or with weedy turf. Some weeds can be destroyed by dressing them with sulphate of ammonia, but it is doubtful whether it will kill Plantains without permanently injuring the surrounding grass. The Plantain has a deep, vigorous rootstock, from which new crowns spring, although the top may have been killed. The best way to get rid of Plantains is to keep pulling them up and encourage the grass to thicken by every possible means. A good dressing of basic slag will encourage the grass. Soil is also a good dressing to apply to a lawn, but it must be free from seeds of weeds, which thrive in grass. When once a lawn becomes infested with Plantains, it takes several years to clean it, for seedlings continue to appear. Do not mow it without a collecting box to the mower after the weeds begin to flower. We advise you to have the Plantains and other coarse weeds pulled up; then apply a dressing of one of the lawn sands which are at present on the market. A week or so afterwards give a dressing of good soil and basic slag, which should be evenly distributed, care being taken to fill all holes left by the extraction of the weeds.

NAMES OF FRUIT.—P. A. G.—1, Warner's King; 2, Annie Elizabeth; 3, Malster; 4, Tom Putt; 5, Marie Benoit.

NATIONAL DIPLOMA IN HORTICULTURE.

GARDENERS are reminded that in 1913 a Professional Diploma was established with the consent of His Majesty's Government, and as the outcome of an arrangement with the Board of Agriculture. Under such arrangement the diploma was to be (a) styled "National," (b) strictly confined to the members of the gardening profession, and (c) secured by examinations of both a practical and theoretical nature. Among those for whose benefit the diploma was established are the following: Florists, fruit-growers, gardeners, horticultural inspectors, horticultural instructors, landscape gardeners, market gardeners, nurserymen, public park gardeners, and seedsmen. The first Preliminary Examination was held in June of this year, when over sixty candidates presented themselves. A large proportion of these have already entered their names for the first Final Examination, to be held in June, 1915, when there will also be a further Preliminary Examination.

Winter affords to gardeners the time for study which the longer days of spring and summer deny them. Their attention is therefore particularly called to the opportunity of the present months and the distinction which the diploma confers as the highest evidence of proficiency in the craft. It will undoubtedly become more and more recognised by employers as an indication of the ability of those who hold it as years pass along. It raises the rank of the gardener in the profession—a point of great value.

Candidates can register themselves for the examinations after they have attained the age of nineteen. The Preliminary Examination can be taken after the age of twenty-one is reached, not less than four years having been spent in the practice of horticulture. The Final Examination is open to those who have passed the Preliminary Examination and have spent not less than six years in horticulture.

Young gardeners, particularly, are urged to consider the desirability of registering themselves, and of applying themselves to the necessary practical and theoretical work forthwith. From the testimony of the candidates of June last it is abundantly evident that the effort involved proved of great value to them. The examinations are not only a stimulus, but preparation for them necessitates definite work upon systematised lines, according to the candidate's sphere in the profession.

Forms of application for registration, with a syllabus of the examinations, can be had from the Secretary, Royal Horticultural Society, Vincent Square, Westminster, S.W.

SOCIETIES.

BOLTON AUTUMN SHOW.

THE exhibition this year was, as usual, held in the Town Hall on the 20th and 21st ult., and although this locality is suffering somewhat harshly in consequence of the war, it was decided to carry out the arrangements of the show with a reduction in the prize money, any balance arising out of the show to be handed over to the National Relief Fund. The exhibitors ungrudgingly supported the efforts of the executive, the result being a show well up to former efforts, while a number of ladies gave their services in disposing of flowers, fruit and plants which had been presented for the purpose, so that it is hoped the results financially may be satisfactory and a liberal sum handed over to the above-mentioned fund.

The cut Chrysanthemums were fully up to the average, and it is questionable whether the thirty-six Japanese set up by Mr. C. Jones, Abergele, were not the finest yet seen in the Town Hall. The whole of the blooms were remarkable for their even form, size and freshness. His Majesty was a grand bloom, Queen Mary immense,

while a sport from this variety looks most promising, being broader in petal, of good substance, and of the same purity as the type. Mr. A. Chandler, gardener to Arthur James, Esq., Rugby, was a good second, his Queen Mary being extra large.

For twenty-four blooms, twelve incurved and twelve Japanese, Mr. A. Chandler improved his position mainly through his incurved, which were notable for compactness and finish; this stand proved that this section is still worthy of a place. Mr. J. Copple, gardener to J. Bell, Esq., Huyton, was second with larger incurved blooms, but they lacked the finish of the former.

For six vases of singles, ten blooms in each vase, Mr. Loo Thomson, Formby, won the coveted position with grand blooms, but not approaching coarseness. Mr. W. Byrom, gardener to the Earl of Ellesmere, Worsley, was second with good flowers.

In the six vases of undisbudded blooms, Mr. A. Porter, Cheadle, was in strong evidence with immense masses of well-coloured flowers. Mr. J. Nixon, gardener to O. Robinson, Esq., Alderley Edge, followed.

The circular basket brought a pleasing display, the blooms being set well apart and improved by added foliage. Mr. J. Nixon was especially happy in his set, Croton and Asparagus foliage adding greatly to the charm. Mr. A. Adshad was second with good flowers.

One vase of Carnations brought some lovely blooms, Mr. J. E. Elliot, gardener to T. D. Grimshaw, Esq., Burnley, and Mr. J. McGregor being placed as named.

Groups are always a strong feature, and the show under review was no exception as regards quality. Mr. H. Shone, gardener to J. W. Makaut, Esq., Gilnow Lodge, Bolton, although not in the realms of competition, occupied the centre of the hall with a large circular group, which did him much credit, both for the quality of the material and for the tasteful manner in which it was arranged, his abundance of *Cattleya labiata* and well-grown *Bertolonias* proving valuable adjuncts.

The group of undisbudded Chrysanthemums in half-circular form brought two competitors, who both staged fine banks fully 10 feet in height with bright flowers, the first prize group, shown by Mr. Ben Hardy, gardener to G. S. Peck, Esq., being a little brighter in colour than that exhibited by Mr. D. Wilson, gardener to Miss A. M. Phillips, Prestwich.

For the mirror group Mr. H. Wainwright, gardener to Mrs. Charles Taylor, Heaton, was the first and only competitor, in which his material was staged to advantage.

Mr. M. Hodgson, gardener to E. Timberlake, Esq., Worsley, led the way for three Orchids with choice varieties, Mr. J. Ramsden having the leading single plant.

Mr. H. Wainwright won the leading place in three classes for Chrysanthemums in pots.

Mr. W. Austin, gardener to Lever Tillotson, Esq., took four firsts for Begonias, Cyclamen, Roman Hyacinths and a specimen Palm.

Mr. A. Porter, Cheadle, had the leading dinner-table plants.

The numerous other classes were well filled, the Chrysanthemums in vases being excellent, but details of these cannot be given owing to lack of space. The arrangements throughout were highly creditable to those concerned.

BIRMINGHAM AND MIDLAND COUNTIES GARDENERS' ASSOCIATION.

FLOWERING TREES AND SHRUBS FOR GREAT BRITAIN. OWING to the regrettable absence of the chairman (Mr. Herbert), Mr. J. Higley presided on Monday evening, the 16th ult. After the minutes of the preceding meeting had been read and certified, Mr. W. Spinks, the treasurer and an old and much esteemed member of the association, gave an instructive and comprehensive "chat" on "Flowering Trees and Shrubs." The purpose of the "chat" would, he hoped, be achieved by its finally resolving itself into a free discussion, into which he accordingly invited all who wished to enter. In opening, he confessed that this was a subject of which he had always been very fond, and, in view of his great enthusiasm for it, it is only fair to state that perhaps no other arboriculturist in or around Birmingham to-day could look with more meritorious pride on the splendid improvements wrought by his efforts in this direction, for many beautiful specimens of trees and shrubs existing both in city and suburban gardens in this district were planted under his direction. When arranging a new garden, trees and shrubs are usually considered with the object of beautifying any particular space requiring it. With newly planted trees it is a serious mistake to withhold the full amount of requisite attention, as most likely several years would probably elapse before any neglect at the time of planting or mulching could be overcome. Again, too, in the case of pruning—unlike the samples now exhibited in many of our public parks—the art of this craft consists in keeping the cutting so beneath the leaves that the cuts themselves could hardly be discernible. In this way the trees themselves thus have a natural appearance. There are at present about 1,400 varieties of trees and shrubs in existence, and, of course, all could not be dealt with in a single "chat." Mr. Spinks, therefore, took the most important. These he classified in the following manner: (1) Large flowering shrubs of an ornamental character; (2) the smaller or free-flowering kind; (3) the evergreen; and (4) those of a deciduous nature. In each case the speaker gave a full and well-selected list, contributing to each single plant contained therein a few brief remarks as to its habits and its cultivation, divulging by this means much useful information. That the "chat" had more than attained its object was fully evident by the brisk alacrity with which several members responded to the ensuing discussion. The customary, but none the less appreciative, vote of thanks was proposed by Mr. Cryer and ably seconded by Mr. Palmer.

THE GARDEN.

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DECEMBER 12, 1914.

NOTES OF THE WEEK.

Carnations for the Belgian Relief Fund.—We are informed that the total amount realised at the auction sale kindly conducted by Mr. E. Prothero at the close of the Perpetual Flowering Carnation Society's London Show on Wednesday of last week was £19 18s. 6d. Considering the few people who were present, this amount, which is for the benefit of our Belgian friends in this country, is fairly satisfactory. Had the sale been more widely advertised, no doubt the sum would have been considerably augmented.

Horticulture in Ypres.—It was with mixed feelings of sympathy and pleasure that we renewed our acquaintance, at the Carnation show held in London last week, with Mr. V. Bouckennooghe of Ypres. Mr. Bouckennooghe, as an Old Kewite, is well known to many horticulturists in this country, who will be grieved to hear that his nursery at Ypres is practically ruined. The large Carnation house, in which flowers and plants were grown for market, has been demolished by four German shells, which exploded in or near it, and practically the whole of the outdoor nursery is pitted with huge excavations caused by shells. Mr. Bouckennooghe, who is now staying in this country for some little time, speaks in the highest terms of our soldiers who are fighting in the Ypres district, and also of the kindness extended to him and his family by horticulturists and others in this country.

A Good Winter Cherry.—Although we are not greatly enamoured of dried plants, we must make an exception with the beautiful Winter Cherry named *Physalis Bunyardii*. Its two parents, *P. Franchetii* and *P. Alkekengii*, are known in most gardens where hardy plants are grown, but *P. Bunyardii* is a decided improvement on both. The curious balloon-like capsules are large and of brilliant scarlet hue, while the stems often attain a height of nearly four feet. If cut about the end of October and gradually dried, the capsules retain their colour throughout the winter. The fruit inside the capsule resembles a small Tomato or, externally, a Cherry, hence the popular name. This hybrid was raised by the late Mr. Fry of Addington, near Maidstone, and sent out some years ago by Messrs. George Bunyard and Co. The plant will thrive in almost any kind of soil, but as it spreads

rather rapidly, it ought not to be planted close to slow-growing choicer plants.

Chrysanthemums for War Funds.—At the Stevenage, Herts, Chrysanthemum Show held recently, the whole of the proceeds, amounting to over £50, were devoted to providing tobacco and other comforts for the men of the Hertfordshire Regiment now at the Front. For a small town such as Stevenage the result is highly creditable, and we cannot imagine a better cause to which flowers could be put at the present time.

Saponaria ocymoides.—For mantling rock and shrouding it for a period of weeks in the summer-time there is perhaps no easily grown alpine plant more desirable than this rosy-coloured Soapwort.

possible culture, reproducing itself freely from seeds, and is the more precious because of the fact. These may be sown in the earliest days of the year. Cuttings of the fresh young shoots also root freely in late summer or in early spring, and these are necessary in the case of varieties.

Late-Fruiting Thorns.—When planting Thorns it is as well to bear in mind those that retain their fruits late in the season, as there is considerable difference among them in that respect. *Crataegus Carrièrei*, a beautiful tree with large orange fruits, the leaves also remaining on the tree after other trees are bare; *C. prunifolia*, an attractive variety of *C. Crus-galli*; and *C. durobrivensis*, one of the American Thorns, are some of the best. These are very conspicuous at the present time, when the majority of Thorns are quite bare.

Resignation of the Rev. David R. Williamson.—Many flower-lovers, and among them our readers, will learn with regret that the Rev. David R. Williamson, minister of Kirkmaiden, Wigtownshire, and a frequent writer in **THE GARDEN**, has resigned his charge on account of failing health. Mr. Williamson has for years devoted special attention to Roses, Lilics and Sweet Peas, and his collection of these at Kirkmaiden and reflections thereon have been the theme of many pleasantly written notes. Mr. Williamson is also devoted to music and poetry, and has the acquaintance of many of the leading artists in the musical world. His poems, such as his best-known works, "Poems of Nature and Life," show poetical abilities of no mean order.

Sternbergia lutea angustifolia.—A rock garden should not be without a group of this beautiful plant. Flowering as it does in the autumn with such bulbs as *Zephyranthes*, *Colchicums* and *Crocuses*, it adds a note of warm yellow, which the others all lack, to the rock garden. Beautiful as is the type, the variety *angustifolia* is preferable, as it appears to be hardier, and certainly blooms more freely. It should be planted in a warm spot in well-drained soil, and where it will remain undisturbed. A large clump of it has been flowering in our garden now for over two months, and is still producing its large, bright yellow, Crocus-like flowers above its dark green foliage.



SAPONARIA OCYMOIDES, A DWARF SOAPWORT WITH ROSE-COLOURED FLOWERS.

Inhabiting Central and Southern Europe in the wild state, chiefly in stony and rocky places, and sheeting these with an array of blossom impossible of description, the conditions of its home life afford a clue to its garden requirements, and it is in these probably, or the nearly related conditions of wall garden or ruins, that the plant is most prodigal of flowering. By reason of its trailing, prostrate habit of growth it is well suited for high-placed positions, and given a deep root-run—half soil, half stone—in crevice or cranny, its greater luxuriance is suppressed and a meandering stream of colour several feet in extent the net result. Happily, the plant is of the simplest

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Regelio-Cyclus Irises.—I have read with considerable interest the very lucid and instructive article by Mr. E. H. Jenkins on this subject which appeared on page 575 of your issue dated November 28. Mr. Jenkins' success with these charming plants will, I am sure, induce many other readers who, like myself, have tried and failed, to try them again, and if only a small measure of the success that he has obtained falls to my share I shall feel more than grateful to this veteran writer. In the past, through studying carefully his articles in *THE GARDEN*, I have derived much valuable information, and I hope he will long be spared to give readers the benefit of his wonderful store of knowledge.—T. T.

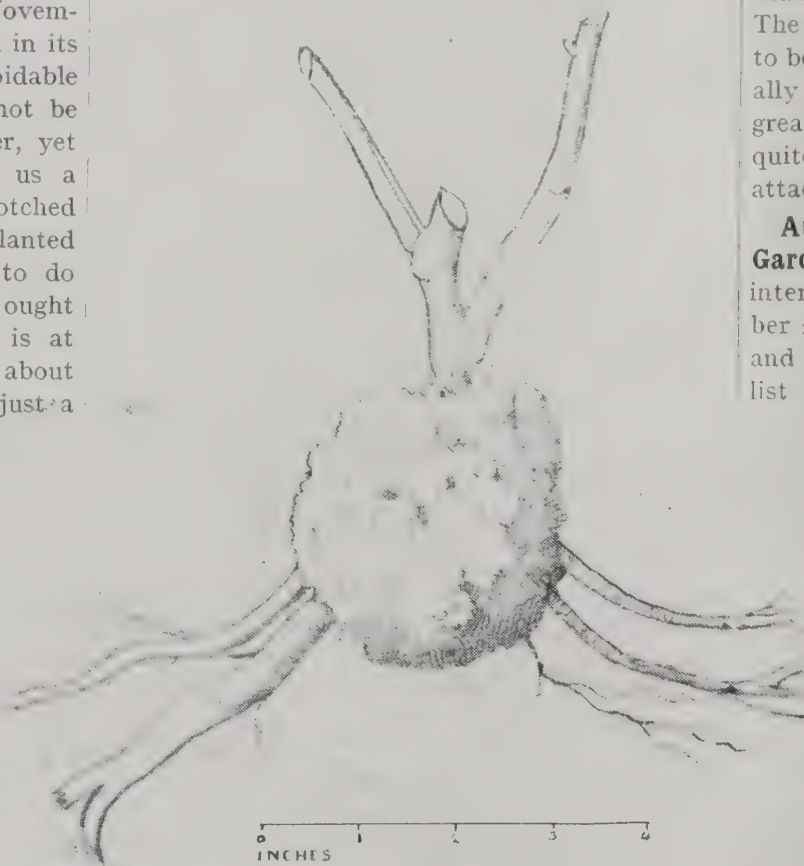
Crocus susianus.—I was very pleased to see the appreciative note about this charming little Crocus on page 567 of *THE GARDEN* for November 21. I can fully endorse all that is said in its favour there. Last year, owing to unavoidable causes, some corms of this species could not be planted until the second week in December, yet towards the end of February they gave us a glorious display of rich yellow, chocolate blotched flowers. Hence those who have not yet planted some need not fear that it is too late to do so now. Another charming Crocus that ought to be much more widely known than it is at present is Sieberi. With me it flowers at about the same time as *susianus*, or perhaps just a little earlier, and its dainty lavender blue flowers, with their vivid orange stigmata, never fail to elicit high praise from gardening friends.—EAST HERTS.

How to Plant Crinum Powellii.—I recently bought some bulbs of *Crinum Powellii* and planted them according to the directions given in Mr. William Robinson's "The English Flower Garden," i.e., "the top of the bulbs 6 inches deep," to avoid the risk of frost. To my horror I afterwards read in the cultural directions issued by Mr. Van Tubergen, jun., as follows: "Their long-necked bulbs must not be buried too deep . . . one-third of the bulb must remain above the surface." A well-known English nurseryman's catalogue says, "but are the more secure from injury by frosts if the bulbs are buried 12 inches deep." Yet another catalogue tells me they should be planted 6 inches to 8 inches deep. There is no dispute as to where the bulbs should be planted or as to the compost for them, but Mr. Van Tubergen's advice is entirely opposed to that offered by the others quoted. Will some of your readers who have grown *Crinum Powellii* successfully kindly tell me the method they have adopted? I have a lively recollection of the glorious specimens I saw in the late Sir Trevor Lawrence's garden some years since. Would that I could learn how they were grown at Burford!—ENQUIRER.

Berried Shrubs in Autumn.—The interesting note by "S. X." on page 545 induces me to say that *Cotoneaster adpressa* (syn. *congesta*) never fruits with me here, although it flowers freely and is remarkably pretty. The others I grow, such as *C. horizontalis*, berry freely. An interesting and pretty little shrub not nearly enough grown is the Pearl

Berry (*Margyricarpus setosus*), which is of trailing habit and only a few inches high. It has dark green foliage, and among this are the white, pearl-like berries which give it its name. It is still in fruit as I write this on November 25, and looks well trailing over the stones of the rock garden. The *Pernettyas* are also excellent, and I was much struck with the beauty of some plants in the rock and water garden of Mr. E. A. Hornel, Broughton House, Kirkcudbright, the other day. The best-coloured *Pernettyas* are very fine, and when the plants are a foot or so high and with a good supply of berries in good clusters, are exceptionally fine in October and November.—S. ARNOTT, *Dumfries*.

Cuttings with "Heels."—I was pleased to see that your correspondent Mr. E. H. Jenkins, in his note on "Propagating Perpetual-flowering Carnations," states that he gave up the "heel" cutting some years ago in favour of the joint-made one, the latter making much the better plant. Why we are so continuously told to take off



SKETCH OF THE ROOTS OF A ROSE BUSH ATTACKED BY CROWN GALL, AND SENT TO US BY MISS JEKYLL.

cuttings with a heel of the old wood, not particularly with regard to Carnations, but indoor plants in general, I cannot imagine, unless each one blindly follows an old, but now generally exploded, idea. That the heel of old wood, in nearly every case if not all, greatly retards the action of rooting is now well recognised by those who keep their eyes open. What is more, the young plants when struck do not grow away with the same amount of freedom as cuttings formed entirely of the young shoots. The heel of old wood or slip of the cottager is a survival of the practice of our forefathers, who, in striking even soft-wooded cuttings such as Fuchsias, always considered a joint at the base as absolutely necessary. Now, by so cutting a shoot that the bare space below a joint is allowed to remain on, and inserting it in the soil up to the pair of leaves, it roots freely. By this means practically double the quantity of cuttings are obtained—a very important matter in the case of expensive novelties.—H. P.

Crown Gall on Rose Root.—Occasionally I have seen at the root of a Rose a small, knobby lump, but have never seen so large an example as on the root of a Jersey Beauty just taken up. The mass is an irregular ball $3\frac{1}{4}$ inches in diameter at the widest part. It looks like an accretion of granules such as appear at the callusing of a cutting. It feels not quite hard, but spongy-woody. The plant is a two year old cutting. The wood of the last season's growth and the roots appear healthy. It may interest others of your readers besides myself to know the name and life-story of this abnormal growth.—G. JEKYLL. [The curious spongy swelling on the Rose root is a gall which Dr. E. Smith of Washington has shown to be due to the attack of a bacillus called *Bacillus tumefaciens*, and commonly called crown gall. The disease is a peculiar one, in that a great number of different plants are liable to attack, including Apple (on which we have often seen it), Loganberry (on which it is quite common), Birch, Cherry, Peach, Rose, *Chrysanthemum frutescens*, Carnation and numbers of others. The actual harm done to the plant does not appear to be great, at least in many cases, though, especially in America, the disease is looked upon with a great deal of suspicion. The bacillus is no doubt quite commonly distributed in the soil, and probably attacks plants mainly through small wounds.—ED.]

Autumn-flowering Plants for the Rock Garden.—In the concluding sentences of her interesting article in *THE GARDEN* of November 28 on "Preparing a Rock Garden for August and September," "K. L. D." says: "A longer list might be given if other miscellaneous plants were included; but it is already long enough to show that the rock garden in August and September need not be lacking in flowers"; while in the body of the article she also says: "It must always be borne in mind, however, that locality, North or South, makes all the difference in time of blooming." To take the last first, it is doubtless perfectly true to a certain extent, but not to any extreme extent. For instance, it is not sufficiently dominant to make a summer-flowering plant in the South into an autumn-flowering one in the North. It may modify, to some extent, its flowering period over a week or so; certainly not much longer. Situated in the middle of Yorkshire, on tableland

400 feet above sea level, open to every wind that blows from north, east, south or west, I do not suppose there is more than a week's difference between plants in Sussex and here; therefore it is with the greatest pleasure I beg to supplement her excellent list of plants for the autumn season. Without trespassing on ground already covered, I would mention, in addition, the following good autumn flowers. First, foremost and indispensable is *Verbena chamædryoides*. There is nothing either at this time or any other to compare with its mass of pure, glowing scarlet; falling over the face of a large stone, as I have had it here, 4 feet square, the effect was simply glorious, and continued so for weeks. It came through last winter quite safe, although the thermometer went down to 2° below zero in March, so I think its hardiness is assured. "providing always," as the lawyers say, that it is planted in such a position that no moisture can cling round it during winter; therefore plant it well up on the rock garden in good sandy loam and plenty of chippings mixed among it, with a

good big stone to ramble over, and you have a pure delight in store. *Veronica Lyallii*, a squat little shrubby *Veronica*, with white flowers, is also a first-class plant for this time of the year, and *V. rupestris* is too well known to need any booming, but, planted in a good mass, its sheets of lovely blue are most effective. *Androsace Leichtlinii* and its variety *oculata* are also to be relied upon for a long and lasting display, while the *Campanulas* give us many good things in addition to those mentioned. *C. muralis* is a fine, true autumn bloomer, as are *C. pulla*, *C. pulloides*, *C. Profusion*, *C. haylodgensis*, *C. G. F. Wilson*, to say nothing of the *garganica* section, *C. g. alba* and *C. g. hirsuta*, and *C. rupestris*; and most valuable is the new variety, *W. H. Paine*, which has been a treasure for weeks; *C. carpatica alba*, *C. Raineri*, *C. Scheuchzeri* and its white variety, all of which are splendid for August and September. The *Heaths* are invaluable, but have been well dealt with by "K. L. D.," so may be passed by me, but the *Potentillas* cannot be omitted. *P. formosa*, pink; *P. Willmottæ*, cherry red; *P. Tonguei*, a lovely orange, one sheet of bloom; and *P. fulgens*, silvery grey foliage and golden strawberry flowers, are all worth a place. *Viola gracilis*, *V. g. lutea*, *V. Purple Robe*, *V. munbyana*, *V. cornuta*, *V. c. alba*, *V. c. purpurea*, *V. c. Violet Queen*, *V. Papilio*, *V. floribunda*, *V. bosniaca* and a host of other very beautiful hybrids and varieties that our friend Mr. Hayward can tell us about (and I hope he will) can all be pressed into service. Then, as well as *Linaria alpina*, with its rich purple, orange-blotched flowers, there are *L. a. rosea* (equally charming, in pink), *L. repens*, *L. pallida* and *L. p. rosea*, all good, thrifty growers and flowerers. *Mimulus Ruby*, *M. Brilliant*, *M. cupreus*, *M. Burnatii*, with *M. Lewisii* and *M. cardinalis* for the damp places. *Oenothera pumila*, tiny yellow; *O. mexicana*, pink; with large-flowered *O. macrocarpa*, are all useful. *Oxalis enneaphylla*, *O. floribunda*, *O. arborea rosea*, &c. *Geranium sanguineum*, *G. lancastriense*, *G. Traversii* and *G. wallichianum*, purple, pink and blue, all good things for this season. *Pentstemon glaber*, *P. alpinus*, *P. heterophyllus* and *P. Bridgei*. *Dianthus barbatus magnificus*, the old double crimson Sweet William, can be depended upon to be one sheet of crimson, and *D. petraeus*, *D. Carthusianorum*, and *D. Wimmeri* all follow on after *D. alpinus*, *D. neglectus*, *D. cæsius*, &c., are done. *Hypericum fragile*, *H. empetrifolium*, *H. alpinum* and other varieties take their places. *Sedum Sieboldii*, *S. kamschaticum*, *S. leibmannianum* and *S. spurium*, in white, pink and crimson, all add their quota; and other things to be briefly named are *Wahlenbergia vinæflora*, blue; *Scutellaria indica japonica*, mauve; *Primula capitata*, bloomed with me for months; *Asperula suberosa*, pink; *Prunella rosea superba* and *P. webbiana*, most valuable autumn bloomers. *Corydalis lutea* (indispensable), *Nepeta Mussinii* and the richer-coloured *N. violacea*, *Cistuses* and *Helianthemums* may be relied on to give a good show also. These, although adding considerably to "K. L. D.'s" list, by no means exhaust the autumn bloomers, which are being added to every week and will be in the future; and though we may never equal the spring display on the rock garden, I think sufficient material is in evidence to prove that, apart from the great interest that is always present to the true rock gardener—whether his plants are in bloom or not—there is now no need to fear any dull season (except the depths of winter) on the rock garden.—ALVA J. HALL, *Harrogate*.

NOTES ON CARNATIONS.

HOW apparently indifferent details affect results was brought home in a forceful manner in the way two batches of cuttings rooted, the later batch, inserted and treated in every way similarly to a batch put in eight or ten days earlier, being the first rooted. The one difference consisted in the later batch being thrown into water as the cuttings were detached, and in the earlier batch being kept in a dry state till prepared, and then inserted in sand and water. There was no evidence to the eye of any difference in the cuttings all along; but that the slight drying was followed by the best results cannot be doubted. Lots of plants can be grown without being so particular about slight details; but, depend upon it, the Perpetual-flowering *Carnation* is not one of these, and much of the ultimate success or its opposite is the result of attention to seemingly trivial things at an early stage of their existence as plants.

Such another I would like to emphasise at this time. It is that the young plants, once root action is set going after the newly rooted cuttings are potted, should be grown coolly and as well ventilated as the weather permits. It is true the growth will be less rapid up to March or April, and the progress made by those which have been subjected to a more generous, if less bracing, treatment will be more in evidence. But day by day—afterwards the hardier brought-up youngsters will shoot ahead, and before long leave their pampered competitors in the rear.

For Flowering Plants the most exacting period of the year has now been reached. There are several things to be guarded against—insect infestation for one, and frequent vaporising must take place as a preventive rather than a destructive measure. Slight heat in the pipes is advisable, because it permits of the maximum of ventilation without reducing the temperature below that needed to keep the plants moving, though ever so slowly. Overheating and lack of ventilation are, however, disastrous. Manuring and watering are also of prime importance. If manure has been recently applied, no more should be needed till well on in January. At this season it has a very decided effect on the calyces and on the quality of the petals, but in neither case a beneficial effect.

The Application of Water depends to some extent on the quality of the soil, some soils retaining moisture much longer than others. At the same time, it must have been patent to all who have grown the *Carnation* with observation that it is a plant that succeeds best when it is not necessary to apply water frequently. I should be inclined rather to lower the temperature a few degrees during the winter months, so as to reduce at the same time the quantity of water, than to be more often called to moisten the soil. At the present time, plants in proper condition should be furnished with buds in all stages, and it is absolutely certain that a little veering to overheating, overmanuring and overwatering for the next six or seven weeks will weaken the plants permanently and depreciate the spring supply of bloom. Still there are occasions when it is more important not to conform strictly to what one knows to be the correct treatment than to go on these lines; such, for instance, when an abundance of bloom is required for some special purpose.

A week or so of a higher temperature may then, and should be, risked, and the plants as a rule will not suffer appreciably.

Border Varieties from Cuttings.—I have not previously noted how satisfactorily some border *Carnations* can be increased by means of cuttings taken at this time. The cuttings should be selected from the stems, these invariably rooting best. They may be inserted in sandy soil under bell-glasses or in frames and kept close till rooted; but by far the most satisfactory way is to treat the cuttings in the same manner as Perpetuals. They root in about the same time, and if potted promptly and in due time transferred to a cold frame or pit are capital material for planting out in the spring before the cold-treated cuttings have scarcely rooted. These have the advantage of layers—in Scotland at least—in flowering later. Let me add that potted layers being wintered in frames should be kept perfectly dry. The lights need not be put over them in fine weather; in wet certainly, but with the maximum of ventilation. No frost nor *Carnation* malady will affect them under these conditions.

R. P. BROTHERSTON.

APPLES AND PEARS: THEIR FLAVOUR AND PEDIGREE.

THE eating of a fine ripe fruit of the Mother Apple (the American Mother of most catalogues) has set me thinking on the value and importance of flavour in our modern fruits, and, incidentally, on the interest which attaches to their pedigree and origin. On referring to the admirable list that Mr. Edward Bunyard has compiled on the origin of our present-day Apples, I find "Mother (American), origin uncertain," and it is the same monotonous story with the very large proportion of the things we devour and enjoy. I had a letter from a horticultural friend recently, deploring the lack of any record of some of the best-flavoured Apples now popular. He wrote: "All our best fruits came to us haphazard, no one knows how," and he goes on to extol and encourage the practice of "considered crossing, on definite lines"; and to anyone who proceeds in this way added interest and value will be given—to the horticulturist, at any rate—if detailed records are kept.

If anyone asked me what motive to work for, I should reply, "Flavour, flavour, and again flavour." There is an enormous quantity of fruit "chucked" on to our markets that will appease the appetite of a hungry man; but to the man who possesses a brain and a palate (and the two generally go together) what a small selection there is! Among Apples we have Cox's Orange Pippin, *facile princeps* in a good season. Let us see what Mr. Bunyard has to tell us of this fruit, "raised by Mr. Cox of Slough and introduced about 1850"; again no pedigree. Then we have Mother, mentioned before; Cornish Gilliflower, superbly flavoured when in perfection, but just a foundling like the others.

The series of Apples raised by Mr. Charles Ross do indeed possess a pedigree, and very handsome fruits some of them are; but I have tried hard, and I regret to say unsuccessfully, to find any trace of so fine a flavour in them as is possessed by any one of the trio that I have named above.

In fact, I think that Mr. Ross appears to have worked generally on quite wrong lines in choosing for one of the parents of most of his hybrids such a huge and particularly uninteresting fruit as Peasgood's Nonsuch. I believe that Messrs. Laxton, and probably several others, are at work on the lines that I have indicated are desirable; but I do not think that they have as yet put any particularly superb variety into commerce.

Let us turn to Pears. My two especial favourites are Seckle and, of course, Doyenné du Comice. To paraphrase Shakespeare, the man who does not appreciate a fruit of Doyenné du Comice is indeed "fit for treasons, stratagems and spoils." When at its best I confess I do not know of anything in the world that is more delicious to eat. Mr. Bunyard says that it was "raised by the Horticultural Society of Maine et Loire at their garden in Angers, France, and first fruited in 1849." The fact that the Horticultural Society of Maine et Loire has not apparently seen fit to publish its pedigree

people do; and not long ago a letter came my way from a still young man who was retiring from Parliament asking my advice as to what particular branch to take up in the hybridisation of plants. I advised him to "go for the Apple." I hope he is now doing so. Although I have dabbled in the cross-breeding of various plants and have put in a good deal of earnest work with some things, notably flowering bulbs, fruits have not up till now been within my line; but should I at any future time have the opportunity, I do not think I should fail to keep and maintain as complete a record of the pedigrees as it would be possible for me to do, always bearing in mind of what immense importance and interest such a record would be to many others besides myself.

F. HERBERT CHAPMAN.

[We have considerable pleasure in publishing Mr. Chapman's article, as it deals with a subject that is of peculiar interest and importance to gardeners and fruit-growers. Unfortunately, the

GOOD VARIEGATED PLANTS FOR THE HARDY BORDER.

AMID the wealth of flowering subjects for the hardy flower border, the claims of foliage plants are apt to be overlooked. I purpose, therefore, to briefly draw attention to a few of these whose beauty lies in their variegation. I begin with *Iris Pseudacorus* fol. var., the variegated Bastard Iris. In Scotland this beautifully variegated Iris begins to show up in the beginning of May and keeps good for six weeks or two months, after which it begins to lose its brightness. About the afore-mentioned date *Funkia undulata* fol. var., the variegated Wavy Funkia, unfolds its beauty, both in colour and form. The variegation of both the foregoing is of a pale primrose shade. *Symphytum officinale* luteo-marginata, being a Comfrey, may be regarded by some as being rather coarse, but its golden-margined foliage justifies its inclusion in any collection. It should be planted near the front of the border, and the flower-stems ought to be cut over as soon as they begin to appear.

In *Hemerocallis Kwanso* var. we have a plant with gracefully recurving foliage, and with a lovely silver variegation suggestive of a small specimen of *Pandanus Veitchii*, but as easily grown as any of the other Day Lilies. *Phlox Comtesse de Jarnac*, being of more recent introduction than any of the preceding, is on that account better known, but it well deserves the popularity it enjoys. Planted in groups of threes or fives, it has a very telling effect.

Scrophularia nodosa var., the variegated Murrain Grass, was a popular bedding plant in the sixties and seventies of last century, but, like many of its contemporaries, it has long ago been relegated to the limbo of forgetfulness. Its merits as a silver-variegated plant, however, entitle it to a place in the hardy border, which it always enjoys here. The flower-stems should be pinched out as soon as they begin to push. The variegated

Balm, *Melissa officinalis* var., is well worth attention, and can be either allowed to develop or be pinched back and used for the front lines; it shows up best in poor soil. Of the dwarfer variegated plants I will only indicate a few. *Dactylis glomerata* var., the variegated Cocksfoot Grass, is another of the old popular bedders and has never been quite discarded; its form and colour both entitle it to a place in the hardy border. *Arabis albida* var. is very well known and is frequently used for edging walks. It is of *A. lucida* var. I desire to speak, however, with its rosettes of golden-variegated shiny foliage hugging the ground; truly a gem of the finest quality. Some people have difficulty in getting this plant to thrive, but its culture is simple. Prepare the ground well prior to planting, working in some good flaky leaf-mould; plant deeply, move seldom, but prick round the plants each spring with the hand fork, and, slightly lifting the foliage, top-dress with a little fresh loam



FRUITING BRANCH OF CHERRY KENTISH BIGARREAU. TREES MAY BE PLANTED NOW.

does not deter me from raising my hat to our good Ally, La Belle France, as I have done many times recently.

Seckle is a little fruit of beautiful melting flavour, of American origin, "found in a wood near Philadelphia," and that is about all we know respecting it. It apparently never had a father and a mother, but, like Topsy, just "grewed." Any evidence of hybridity in all these things, any trace even of the seed-parent, is missing.

I have read somewhere that the late Mr. Rivers, after tasting an Apple or Pear that he found of good flavour, would save the pips and sow them in pots which he had duly filled and prepared ready to hand, an old-fashioned method which had its merits, as a record of the seed-parent could then, of course, be kept; but the present-day seedling raiser is, I hope, raising his things on far more methodical and up-to-date lines as a rule. I look upon the Apple as far and away the most valuable of all our fruits. I imagine that most

process of raising new Apples, Pears and many other fruits on systematic lines is a very slow one, and many nurserymen cannot afford to devote the necessary time to it. We think it is a subject that the scientific and research establishments now subsidised by Government or other public bodies might profitably take up.

A GOOD SWEET CHERRY.

ONE so often hears complaints that Cherries do not crop well in gardens when grown as bush or half-standard trees. Undoubtedly a wall is desirable for most of the choicer kinds, but the variety illustrated herewith, and named Kentish Bigarreau or Amber Heart, will do well in most gardens grown in either of the forms named. It is a very old variety, with fruits of medium size, pale yellow in colour, with red on the exposed side. The flesh is white, juicy and sweet, and the fruits are in season during July. FRUIT-GROWER.

and flaky leaf-mould; pick off the flowers as soon as they begin to appear. *Thymus citriodorus argenteus*, the silver-variegated Lemon Thyme, is suitable for front lines: moreover, it is as acceptable to the cook as is the type. The variegated form of London Pride (*Saxifraga umbrosa*) is very attractive, but requires to be selected from time to time, as it inclines to revert to the type.

Midlothian.

CHARLES COMFORT.

ROSES IN YORKSHIRE.

(Continued from page 588.)

IN continuance of the vigorous red varieties, I come to

George Dickson.—Here is a Rose that takes one by storm. I shall not easily forget the impression I received when first I saw it staged in masses of gorgeous blooms by the raisers (Messrs. Alex. Dickson and Sons). I returned again and again during the afternoon to examine this fine Rose and to feast my eyes on its lovely colour. It was without doubt the magnet of the show, and before I left I had both ordered the plant for the autumn and managed to possess myself of a spare bloom, which, by the way, lasted considerably more than a week in water. It is truly described as the finest dark red Rose in cultivation, with its glistening blackish crimson petals of great substance. It is an acquisition to any garden, and now available at a more popular price, which is bound to add large numbers to its many admirers. With me this Rose has grown well, and produced blooms which, if few in number, have been of high quality. Perhaps its one fault is a tendency to hang its head. The blooms are heavy, and the stems not quite as firm and vigorous as one would like; but, apart from H. V. Machin (at present beyond my pocket), I have seen nothing to rival it, and I am quite satisfied with the results in the climate of my garden.

George C. Waud also does well here, and is specially attractive because of its unique colour, almost a vermilion, which has the added charm of being able to endure the sun. I have yet to see a bloom that has lost its colour on the tree. It is now threatened with rivalry by *Geoffrey Henslow*, a variety which is obviously a more vigorous grower, but one with which I have had as yet very little experience. I have planted more of it this autumn. Other reds that are reliable in this district, but which I have only space to name, are

General Macarthur, with me specially good in the autumn

Edward Mawley.—Excellent, erect habit of

Alfred Colomb and **Captain Hayward.**—The latter is of a rather thin nature; opens well here even in cool, damp weather.

The varieties of pink and salmon colours are so numerous that it is a work of art to select those that one can usefully grow in a garden which, though somewhat limited in size, is required to contain the best varieties of all colours. In the pure shades of china pink I give pride of place to

Mrs. George Shawyer.—Its habit of growth is free, it is very shapely in the bush, while it produces fine blooms carried on long, stout stems. Another Rose of this lovely soft shade of pink is

Berthe Gaulis.—Unfortunately, it is very moderate in growth here, and while producing

use for exhibition purposes with success, but believe its vocation is mainly a decorative garden Rose.

Caroline Testout.—A very vigorous Rose, and even here continually in flower. It comes unscathed through severe frost and biting winds that play havoc with bushes all around it. For this reason alone every exposed garden should contain it.

Baroness Rothschild is also a very robust Rose, giving perfect blooms of satiny pink and of fine cupped form. The disappointment comes when we are seeking fragrance, a quality which, as every rosarian knows, it is guiltless of

Mme. Abel Chatenay.—One of the indispensable varieties with me. The three or four

plants I have of this variety have given me literally scores of blooms, all borne on long stems, so that they can be cut without the sacrifice of buds. It is a pity it is not a more shapely grower, as it is undoubtedly reliable in every other direction and one we cannot do without.

The Lyon.—It seems invidious and almost unnecessary to write about this variety, with its unique colour of shrimp pink, shaded chrome yellow. In spite of its ungainly growth and its extreme variableness in colour, it is excellent. I have nicknamed it Chameleon, but from it I have cut certainly the largest, and some of them the finest, blooms in my garden. Even on November 22 I managed to find quite a respectable bloom fit for the vase. Out of some seventy varieties I am growing at present, only five have shown any sign of mildew. Unfortunately, *The Lyon* is one of them, although perhaps the least affected of the lot. The worst offender in this respect is *Killarney*, which I have this year expelled from the garden. In my humble opinion it is not worth its room, as it remains mildew ridden against all treatment.

Prince de Bulgarie.—Pale flesh, with rosy salmon centre and attractive shell-shaped petals, this is undoubtedly not only a robust variety, but may be safely classed among town Roses. It has flowered with me continually and right on into late autumn.

Roundhay, near Leeds. E. WATERS
(To be continued.)

THE GLOBE THISTLES.

These interesting hardy plants, known to botanists as *Echinops*, are particularly valuable for grouping in the mixed border, where their globular flower-heads of steely blue add a touch of colour such as we get from few other kinds. They are not at all difficult to grow, flourishing in ordinary garden soil that is well drained and manured. Those who are planting borders now should certainly find room for one or two groups of these Globe Thistles. The best kinds are *E. ruthenicus*, *E. altissimus*, *E. ritro* and *E. banaticus*. I



A FINE PLANT OF THE GLOBE THISTLE, *ECHINOPS SPHAEROCEPHALUS*. THE FLOWER-HEADS ARE STEELY BLUE.

perfect blooms, seems unable to support them. Possibly *Dean Hole's*—or is it *Mr. Mawley's*?—theory of the mowing-machine over the amateur's beds at pruning-time might help me with this variety.

Mrs. John Laing is, of course, a good doer here, and gives numbers of blooms, but one has to make up one's mind early whether three or four exhibition Roses or a decorative bush is required. Quality and quantity are foreign to this Rose. I prefer the quantity, as there are others for exhibition if wanted in this colour.

Lady Ashtown.—Another beautiful pink that is exceedingly floriferous and a decided acquisition to the garden. I have grown it well enough to

AUBRIETIAS IN THE SPRING GARDEN.

THOSE who make careful use of the best spring flowers have been rejoicing in some recent improvements in the Aubrietia. Among these, the most valuable of those now well known is the beautiful variety Lavender, of good size, fully bloomed and of true Aubrietia colour. In the progress of variation of a garden plant, growers are apt to overlook the best purpose or intention. The figures of size, novelty and variety are often illusive; they attract and lead into blind paths. The thing to look for is the purest beauty of which the plant is capable. In the matter of colouring in the Aubrietia the very finest quality may often be picked out in a batch of seedlings of the type *A. græca*. It is a clear, pure lavender purple rather light than deep in tone. We are grateful for the fine deep-coloured variety Dr. Mules, but to the artist-gardener it is not a plant to use by itself in large quantity. Its value is best shown when a few plants are grouped with a larger number of a good form of the more typical colouring. Of the heavy reddish colourings, and even the deep purples inclining to reddish, as far as my own feeling and experience are concerned, they are better avoided altogether. The only colourings with anything approaching a reddish tint that seem to me desirable are the very beautiful palest pink *Moerheimii*, of Dutch origin, and a slightly darker one, brought out, I think, by Messrs. Barr, called Bridesmaid. Both are extremely pretty plants and go well together. For the present the pure, rather light-coloured kinds resembling the fine Lavender would seem to be the best. It was a pleasure last spring to receive from Mr. R. Wallace of Colchester a very beautiful flower of the Lavender type, but better, in that it had not so much of the pale eye that in Lavender is rather too conspicuous. The absence of the white eye makes the flower much more effective in the mass. I am of opinion that the size of Aubrietia bloom should not be further increased. Aubrietia the size of Rocket or Honesty would be a disquieting anomaly. It is not in the nature of the plant, a true alpine, to have large flowers. The mass of small blooms of good form and pure colouring is the true character of the plant and the source of its charm and attractiveness. These charming spring flowers deserve to be more widely grown, both in the rock garden and the border, than they are at present. Their cultivation is not difficult, and they are ideal for the amateur.

G. JEKILL.

THE MOST BEAUTIFUL CLEMATISES.

ONE of the most beautiful families of shrubby and climbing plants is the Clematis. Those who have only a slight acquaintance with flowers know the Traveller's Joy (*Clematis Vitalba*), the misty seed-pods which give a weird effect to the hedgerow in autumn and winter. It rambles over everything within its reach, mingling its silvery colour with the dense glossy green of the Ivy. It is not of the wild Clematis one wishes to write, but the following question

note as to the time they flower and the colouring. All thrive best in a cool soil, such as loam with some lime in it, and in the case of *Clematis Jackmanii*, *C. lanuginosa* and their varieties the bases of the plants should be in such a position that the full rays of the sun do not strike directly upon them during the hottest part of the day.

THE SPECIES OF CLEMATIS.

The following are a few of the more beautiful of the species or wild types: *C. alpina*, which flowers in April and May, is a Clematis from Northern Europe, and bears lilac or mauve blooms in abundance; there are varieties with

white and pink flowers respectively. *C. campaniflora*, a Portuguese Clematis, with white, mauve-tinted flowers barely one inch across, is of strong growth and suitable for the wild garden; the flowering period is from July onwards. *C. Flammula* is well known; its fragrant white flowers, which appear in August, are familiar. The charming variety *rubro-marginata* has flowers margined with red. *C. florida*, a native of Japan, is the parent of one of the types of Clematis which give beauty to the English garden; these bloom in May and June and must not be pruned in spring. *C. lanuginosa* is the parent of many of the largest-flowered garden varieties which bloom from July onwards; all the varieties of this type require to be pruned fairly hard in February. *C. montana* is one of the most beautiful climbers we possess. Its glistening white flowers cover the leaves with their beauty during May and June. A lovely form of it is called *rubens*, which has reddish flowers. *C. orientalis* is easily recognised by its small yellow flowers, which appear in August; it is, however, less beautiful than the variety called *tangutica*, which has larger flowers of richer colour, and these appear from July onwards. *C. patens* is another Clematis from which many garden varieties have been obtained. The forms of this have white or blue flowers in June; the species is found both in China and Japan.

C. Viticella produces many garden varieties, while it is one of the parents of the well-known *C. Jackmanii*. The growth is strong, and the purple flowers appear in profusion.

SELECTION OF VARIETIES.

***C. florida* Varieties.**—These all flower in May and June from buds on the wood matured the previous year. Belle of Woking, silver grey, double; Comète, white, with mauve stamens; Countess of Lovelace, mauve, double; Duchess of Edinburgh, white, double; Elaine, blue, double; John Gould Veitch, lavender, double.



A SINGLE PLANT OF AUBRIETIA IN THE ROCK GARDEN.
DIVIDED PORTIONS MAY BE PLANTED NOW.

has suggested notes upon this beautiful group of flowers: "Would you be so kind as to give me the names of what you consider to be the best hardy, free-flowering Clematises; colour, deep blue, mauve, lavender, and white, none with bars or bands upon them? They are for planting against a wall, but in rather an exposed position, so that I wish them to be hardy and to be at their best during June and July."

In reply to this the following lists have been carefully compiled. Species—that is, wild kinds—have been enumerated and also the varieties, with a

Lucy Lemoine, white, double; Proteus, rose purple; Undine, blue, double.

C. patens Varieties.—These varieties, like the foregoing, blossom from wood matured the previous year; consequently no pruning must be done in spring. Albertine, white, semi-double; Albert Victor, deep lavender, with pale bars; Edith Jackman, white, flushed mauve; Fair Rosamond, blush white, with red bars; Lady Londesborough, silver grey, pale bars; Lord Londesborough, mauve; Miss Bateman, white, red anthers; Mrs. Quilter, white; Sir Garnet Wolseley, pale blue, with reddish bars; Standishii, lavender blue; The Queen, pale lavender; Uranus, blue.

lavender, with violet bars; Princess of Wales, deep bluish mauve; Ville de Paris, white, tinged lilac.

C. Jackmanii Varieties.—All the varieties belonging to this group flower on young wood, and are improved by being cut back to within a bud or two of the base of the previous year's wood in spring. They blossom from August onwards. Alexandra, reddish violet; Earl of Beaconsfield, purple; Gipsy Queen, purple; Jackmanii superba, rich purple; Jackmanii alba, white; Jackmanii rubra, red; lilacina floribunda, grey lilac; Mme. Edouard André, red; magnifica, reddish purple; Rubella, purple; Snow White, white; Star of India, purple, red bars; Ville de Lyon, red.

PLANTING IVY UNDER LARGE TREES.

In a good many private gardens and public parks the ground beneath large trees is bare and unattractive, owing mainly to the fact that grass will not grow, especially where the tree is a dense-growing kind. Such bare places are, to say the least, an eyesore, and an unnecessary one at that. Although there are a number of plants that will grow in such positions, it is doubtful if any are better than the common Ivy. This will thrive in almost any kind of soil, keeps green all the year round, and beyond an annual cutting over in spring needs little attention. In the accompanying illus-



A GARDEN SCENE SHOWING A LARGE TREE WITH AN UNDER-PLANTING OF IVY.

C. lanuginosa Varieties.—These varieties commence to flower in July and continue for a couple of months. The branches may be pruned fairly hard in spring, say, to within four or five buds of the base of the previous year's wood. Alba magna, white; Beauty of Worcester, bluish violet; Duke of Norfolk, deep mauve, with broad, pale bars; Fairy Queen, pale flesh, with pink bars; Gem, deep lavender; Grand Duchess, white, flushed rose; Lady Caroline Nevill, blush white, mauve bars; La France, violet purple; Lord Nevill, blue; La Gaule, white, semi-double; Louis van Houtte, violet purple; Mme. van Houtte, white; Marcel Moser, pale

C. Viticella Varieties.—All these blossom on young wood from July onwards. The branches may be cut fairly hard back in spring. Ascotensis, blue; kermesiana, red; La Nancienne, violet, double; Othello, purple; rubra grandiflora, red; Othello, white and purple. Clematis Durandii is a very pretty, bluish-flowered hybrid which is said to contain C. integrifolia blood. It is of good constitution, and blossoms very freely from July onwards. There is a paler variety called pallida. The foregoing lists, though extensive, could be added to, but sufficient have been named to enable anyone to make selections ample enough for any ordinary sized garden.

tration the effect of Ivy growing under a tree such as we have in mind is well shown. The present is a good season for planting. The soil should, however, be first dug over at least a spit deep, and if a few roots are damaged in the process, no appreciable harm will be done. If it is very poor, it will be improved by the addition of old potting soil, mud from ponds or ditches, or, indeed, almost anything that contains plant food. Small pieces of Ivy with roots attached are easily procurable, and may be planted from 1 foot to 18 inches apart. Of course, the Ivy will not be allowed to climb the trunk of the tree; if cut over annually, there will be no danger of this.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Cherries.—The earliest batch of trees should now be placed under cover, especially if ripe fruits are desired in April. Little more than protection will be necessary for some time, as the Cherry will not stand much heat until the stoning period is over. A temperature of 40° at night is quite high enough for the next two months, and this may be allowed to drop to 35° if sharp frost sets in, merely allowing sufficient heat in the pipes to exclude frost. Open the ventilators freely during mild weather, and syringe the trees about midday when the weather is bright. Very careful attention is necessary in regard to watering.

Protecting Vine Borders.—Although the roots of early Vines should be indoors, there are instances where this is not the case, and it becomes necessary to protect the roots from cold rain and snow. For this purpose some light, warm material should be provided, such as Oak leaves with a small quantity of stable manure. The leaves produce a mild and lasting heat which is all that is necessary, and this material should be covered with corrugated zinc to carry off the moisture.

Late Vine Borders containing Vines on which the Grapes are expected to hang for some time yet should be covered with dry leaves and shutters of some kind to cast off the rain. This is better than placing a quantity of manure over the borders in winter.

Cucumber Seeds should be sown now, and treated in the same way as advised for Melons in last week's calendar. The plants should be ready to put out in January.

Plants Under Glass.

Gardenias.—Plants in pots will need to be watered carefully at this season. Admit fresh air to the house whenever external conditions permit, as nothing is more detrimental to these plants than a close, stagnant atmosphere. Those which are planted in the border must be protected by some covering material if cold weather sets in. This is better than an increase of fire-heat.

Mignonette.—If seeds were sown in small pots in September, the plants will now be ready for potting into larger pots, and this should be accomplished at once, or the colour of the foliage will suffer seriously. Good fibrous loam and decayed manure will suit them well, and a good sprinkling of old lime rubble may be mixed with the compost. Pot firmly, and place the plants in a cool, light position.

Lachenalias.—These plants should now be removed from the cold pits to a position near the glass, in a temperature of 45° by night. When the pots are well filled with roots, manure-water may be applied in a weak state, and, as time advances, a few of the most forward plants may be removed to warmer quarters in order to prolong the flowering season.

The Flower Garden.

Climbing Roses.—The supports to all climbing Roses should be examined now, and all repairs or renewals made before the plants are tied into position. In thinning the plants, as much of the old worn-out wood should be removed as can be spared, as by far the best display is produced from young, healthy wood. In all cases the branches ought to be allowed sufficient space between them to ensure the full development of the flowers and foliage during the summer. In cases where new plants are necessary, the ground should be deeply trenched, and enriched by a quantity of decayed manure from the farmyard.

Berried Shrubs.—If sharp frost sets in, some protection must be provided to berried plants, or the birds are almost sure to work havoc among them. This is easily avoided by placing ordinary garden nets over the plants at once, and, in the case of Mistletoe berries, the nets should be secured round the best bunches without delay.

Garden Paths.—The present is the best time to make or renovate garden paths. In all cases drainage should be the first consideration; for if this is not sufficient, the surface of the paths is sure to present a sodden appearance during the

winter months. If new paths are to be made, the ground should be removed to the depth of 15 inches, especially if there is considerable traffic, and the bottom filled up with good hard core to within 6 inches of the surface, finishing off with the best gravel available. Old walks may be forked over, and if the gravel has lost its colour, a dressing of new material should be applied.

Hardy Fruit.

The Fruit-Room.—Frequent attention will be necessary in order to keep the room quite free from decaying specimens, which must be removed as soon as noticed. Sound fruits are best left unmoved, especially in the case of Pears which are approaching ripeness. Keep the ventilators open in order to allow the atmosphere to be as dry and cool as possible.

The Kitchen Garden.

Chicory.—The forcing of this winter salad plant should receive attention. It is a very easy matter to keep up a supply of tender young leaves throughout the winter, provided some dark, warm chamber is available for the purpose. If only a small supply is necessary, it may be grown in pots in the same way as Seakale. The crowns should be a little above the soil, as the young leaves are easily affected by dampness.

Lettuce and Endive in frames must be freely ventilated during mild weather. Stir the soil between the plants and remove all decaying foliage. The aim should be to keep the atmosphere of the pit as dry as possible during the winter.

Carrots in Frames.—Young Carrots are always welcome, and to have them ready in April the seeds should be sown in a gentle hot-bed about the end of the year. A brick pit without fire-heat will suit them well, and if a bed of leaves can be made up now, there need be no difficulty in producing a satisfactory crop. Protection from frost may be provided by placing mats or dry Bracken over the lights as it becomes necessary.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Mushrooms.—Beds that have been in bearing for a time and are showing signs of exhaustion should be given a thorough soaking of liquid manure with the chill taken off. In collecting material for making up fresh beds, the manure should be spread out in a shed with an open front and turned over regularly every day, as it is sometimes no easy matter to get it sufficiently dry at this season of the year. The temperature in the Mushroom-house should not fluctuate very much; endeavour to maintain it at from 50° to 55°, and keep the atmosphere moist by syringing the walls and paths.

Early Carrots.—If a sowing of Carrots in frames has not been made to provide a supply early in the new year, this should be seen to at once. It will be necessary to place the frame on some hot-bed material, and also to put some of this round the sides. As mentioned in a previous calendar, nice little Carrots can be had when grown in sand with the addition of a little wood-ashes if this is procurable. Beyond correct ventilation—and this must be given on fine days—they require little attention.

Rhubarb.—A few more roots should be lifted to be in readiness for placing in the forcing-house, and to keep up a succession a number of crowns should be covered either with Rhubarb pots or ordinary barrels. It will usually be found that the quality of the Rhubarb is much finer when grown in this way.

The Flower Garden.

Christmas Roses.—In order to have these in bloom towards the end of the month or the beginning of January, it will be necessary to place hand-lights or frames over them now that the flowers will be showing. By this means the flowers will be very much purer and fresher. To increase the flower-stems, the plants should be given frequent applications of liquid manure in a tepid state.

The Rockery.—Now that the leaves of all deciduous trees will have fallen, the rockery ought to be gone over, and all leaves that are lodging about the plants should be removed. It has been advanced by many that these leaves act as a sort of protection to rock plants. This may be true in some districts, but it certainly cannot be so in the Northern Counties, where we are subject to so much moisture during winter. As I have frequently pointed out, a far better protection is to be found in placing some grit or chips of slate or granite round the necks of the plants, which will not only keep the latter safe from moisture, but will also ward off slugs.

Ceanothus Gloire de Versailles.—Among autumn-flowering plants it is doubtful if this Ceanothus has an equal. It blooms profusely, and the delicate blue or lavender flowers are always greatly admired. Where these are growing against a south wall, no protection should be necessary, but in more exposed positions a little protection must be given. It may be added that the growths should be well cut back in the spring, as the flowers appear on the young growths.

Plants Under Glass.

Mignonette.—The most forward plants that have been grown on in pots for early spring flowering ought now to be staked, as it is important that they be kept in an upright position. In order to secure good heads, all the side growths should be removed, and, as the pots become filled with roots, the plants may be assisted with some weak liquid manure. They should be grown as close to the glass as is consistent with safety.

Coleus thyrsoides.—As these plants are fast developing their flowers, they must be given more room, and on no account should they be subjected to excessive heat. A greenhouse temperature will suit them admirably at this stage, and they should be well exposed to the light.

Cyclamens.—A number of the most forward plants may be introduced into a little more heat to give an early supply of flowers. There is always a danger of these plants being attacked by thrip when grown in a dry atmosphere, so that every means should be taken to prevent this by occasional fumigation. When they come into bloom they should be removed to the greenhouse.

Nephrolepis.—Perhaps there is no class of Ferns more handsome and none more suited for furnishing stands in the public rooms or more attractive in the conservatory than the various forms of this Fern. To mention but two varieties—*Piersonii* and *Whitmanii*—it would be difficult to find more elegant Ferns when well grown. These can be propagated by pegging down the small offsets into a bed of fibre, where they will quickly become established.

Violets.—This is perhaps the most critical season for the successful cultivation of the Violet under glass, as during the short, dull days of December it is difficult to keep the plants from damping. Under ordinary circumstances little or no water will be required, but, should it be necessary, care must be taken not to wet the foliage when watering.

The Hardy Fruit Garden.

Canker in Apple Trees.—Various causes are attributed to the presence of canker in these trees, but possibly the chief is the roots getting into an unsuitable subsoil. Where it is not possible to lift and replant affected trees, much can be done by carefully paring the diseased part and painting it over with coal-tar. Give the ground round the trees a good dressing of hot lime.

Fruit Under Glass.

Strawberries.—Where Strawberries are expected early in the season, a batch should now be placed in a house where a slight heat can be maintained. The plants ought previously to have the loose soil removed from the pots and be top-dressed with a mixture of good loam and a little artificial plant food, and afterwards be arranged on a shelf close to the glass. As they commence to grow, a little more heat should be turned on, and the plants lightly sprayed over on fine days. In the earlier stages of growth water must be applied with care, as failure will result if the soil becomes sodden.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

GARDENS OF TO-DAY.

BRANSFORD HOUSE,
CHRISTCHURCH.

THIS, the charming residence of Major and Mrs. Wyndham Pain, is situated on the high wooded slopes bordering the New Forest to the north-east of Christchurch, and commands magnificent views of the sea and landscape for many miles, ranging from south-east to west. Immediately below the broad terrace in front of the mansion there is a rockery border well furnished with suitable kinds of plants, grown in masses, with good effect. *Romneya Coulteri* thrives remarkably well in a warm corner of this border, and bears flowers of extra large size. The terrace itself opens on a square-shaped formal garden, well enclosed, on the south side. Here in summer and autumn Ivy-leaved *Pelargoniums* Charles Turner and Mme. Crousse show to great advantage. *Heliotrope* Lord Roberts, *Pentstemon* Phryne, *P. Pink Bedder*, *P. Southcote Gem*, *Pansy* Lord Beaconsfield, purple *Petunias*, *Lobelia Victoria*, *L. Carmine Gem*, *Antirrhinums*, *Nicotianas* and Scented leaved *Geraniums* combine to make a fine floral display even as late in the season as October.

The front lawns are enclosed by Yew hedges, and the long, formal borders here, which are in keeping with their immediate surroundings, contain fine collections of Michaelmas Daisies. They formed a unique feature, and showed to much advantage against their dense background of Pine trees. A long and broad sweep of lawn, bordered by Pines and Furze (which grows remarkably well in this district), leads gently downwards to the south-west to the Rose garden, which opens suddenly to the visitor, and comes as a most pleasant surprise, as the numerous beds are formed on both sides in floral recesses. This is a fitting termination to the grass glade, with the mansion at the head.

Mr. P. C. Kitcher, the able head-gardener, has splendid crops in the vegetable and fruit gardens, as well as of plants under glass. Zonal *Pelargoniums* fill one span-roofed structure. The plants were grown in open air during the summer, and are now bushy specimens, flowering freely. Notable are Lady Warwick, Mary Carmichael, Prince of Wales, Princess of Wales, Stella Massey, Snowstorm, Mark Twain, Mme. Friedlander and Mrs. Lawrence, among some thirty odd varieties. *Chrysanthemums*, both for the production of large blooms and in sprays for decoration, are grown to perfection. Very fine were Miss Elsie Davies, Reginald Vallis, Queen Mary, His Majesty, Kara Dow, Mrs. Gilbert Drabble, W. Turner, Pockett's Crimson, George Hemming and Bob Pulling. One ideal span-roofed house was filled with remarkably healthy Tree Carnations.

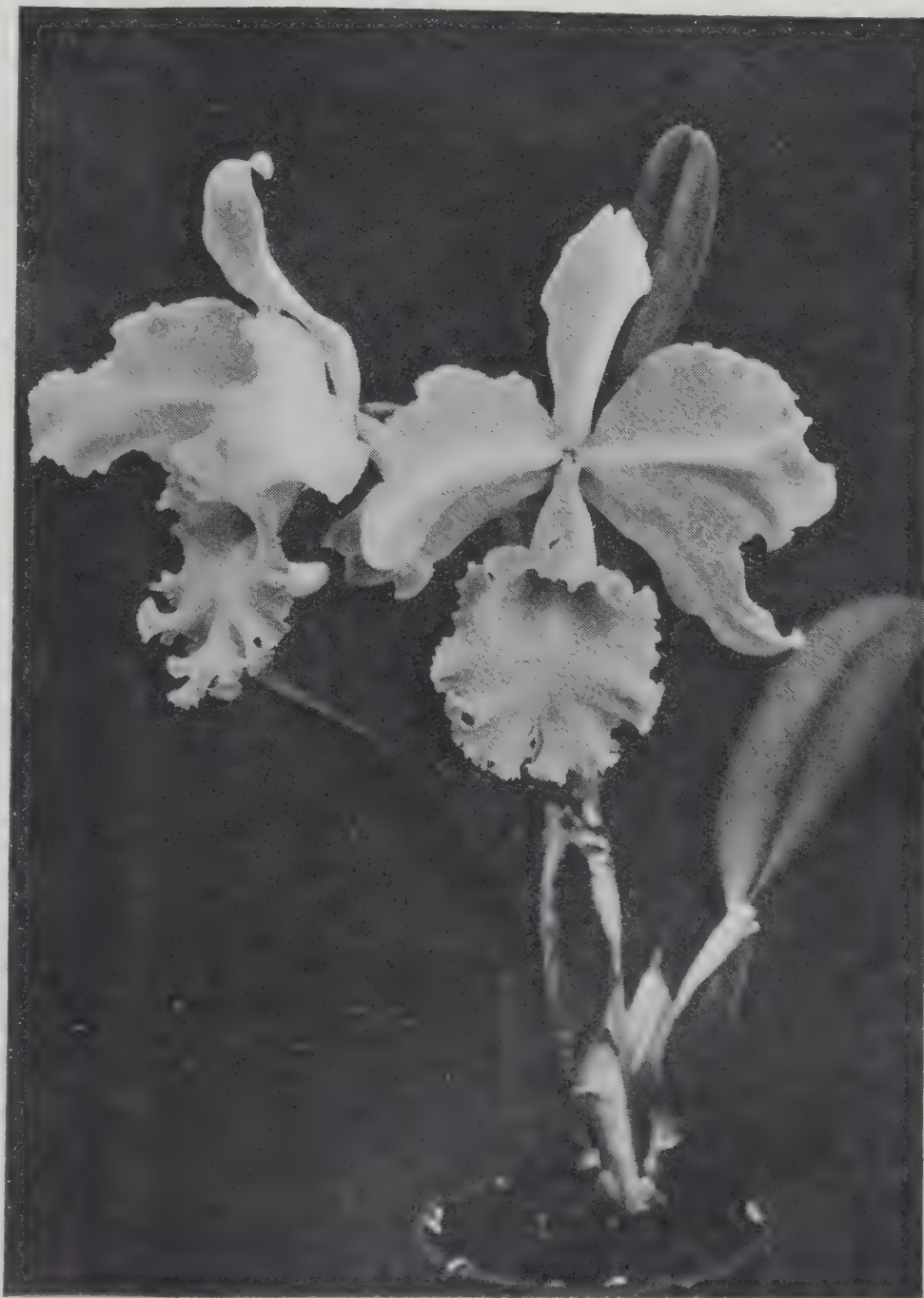
There are many other lovely features which space forbids recounting, but I wish to express my gratitude to Major and Mrs. Wyndham Pain, who take such keen interest in their beautiful gardens, for kindly permitting me to inspect them.

G. GARNER.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Chrysanthemum Mollie Godfrey.—A single-flowered variety of large exhibition size, and of that precise tone of cerise pink which, modified



THE NEW BRASSO-CATTELEYA SHOWN BY MESSRS. STUART LOW AND CO. IN LONDON LAST WEEK.

or refined when seen under artificial light, is of inestimable value to the florist-decorator and generally for decorative work. From E. Mocatta Esq., Woburn Place, Addlestone (gardener, Mr. T. Stevenson).

Brasso-Cattleya Pink Pearl (Cattleya Lord Rothschild x Brasso-Cattleya Veitchii).—An exquisitely beautiful variety of large size; sepal's, petals and lip wholly pink throughout, and of a very charming shade. Exhibited by Messrs Stuart Low and Co., Jarvisbrook, Sussex.

The above awards were made by the Royal Horticultural Society on the 1st inst.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

VALERIAN (*VALERIANA OFFICINALIS*, L.).

(Continued from page 591.)

Cultivation.—In Derbyshire cultivation is from wild plants collected in local woods and transplanted to the prepared land. Preference is given in collecting to daughter plants and young flowering plants which develop at the end of slender runners given off by the perennial rhizomes of the parent plant. Many of the young plants do not flower in the first year, but produce a luxuriant crop of leaves and yield rhizomes of good quality in the autumn. Planting is usually done on land treated with farmyard manure. Weeding requires considerable attention, and it is advantageous to give plenty of liquid manure and artificial fertiliser from time to time. The plants require plenty of water. Any flowering tops are cut off, as they appear, to encourage the growth of the rhizome as much as possible. In September or October the tops are cut off with a scythe and the rhizomes dry up. The clinging character of the Derbyshire soil does not allow them to be left later.

The rhizomes are sliced longitudinally to facilitate washing, which is done in a large perforated wooden box 2 feet to 2½ feet deep, secured by stakes in the bed of a local stream, a rake being used to stir up the "hearts." The rhizomes are dried on a shed floor about 6 feet from the ground. The wet material is strewn on perforated boards, below which a large coke stove is kept going until the drying is complete. About twenty-four parts of the dry product are obtained from 100 parts of fresh rhizome. Derbyshire Valerian plants are of two species, *V. Mickanii*, Syme, on limestone, and *V. sambucifolia* on the coal measures. The former yields most of the cultivated Derbyshire rhizomes.

OTHER MEDICINAL PLANTS.

Experimental growing of some American drugs, such as Senega

Grindelia, Pokeroor and Lobelia, is made at Darent. "Botanical herbs" for sale by chemists and medical herbalists are cultivated at Carshalton. They are grown in rows, which are increased in number according to the demand. The following are regularly cultivated:

Balm (*Melissa officinalis*, L.), for herb
Comfrey (*Symphytum officinale*, L.), for herb
Feverfew (*Chrysanthemum Parthenium*, L.), for herb
Greater Celandine (*Chelidonium majus*, L.), for herb
Germander (*Tenacium Scordonia*, L.), for herb

Marshmallow (*Althaea officinalis*, L.), for root and leaves.

Mugwort (*Artemisia vulgaris*, L.), for root.

Pennyroyal (*Mentha Pulegium*, L.), for herb.

Rue (*Ruta graveolens*, L.), for herb.

Southernwood (*Artemisia Abrotanum*), for herb.

Tansy (*Tanacetum vulgare*, L.), for herb.

Wormwood (*Artemisia Absinthium*, L.), for herb.

Yarrow (*Achillea Millefolium*, L.), for herb.

These herbs and roots are in steady demand, and although those grown in England are preferred, Continental supplies have to be imported to satisfy all needs. They are easily grown from seed, but propagation is commonly by division of old perennial plants. They succeed well from cuttings. Only Pennyroyal presents uncertainty as regards crop, this species being diminished by drought. Most of these crops are worth in the dry state from 20s. to 30s. per cwt.

(To be continued.)

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

ROSE GARDEN.

WEeping STANDARD ROSE DISEASED (J. B.).—The piece of bark sent is insufficient to permit us to say to what to ascribe the death of the weeping standard. We do not think it desirable to slit the bark of trees as a rule, and it may well be that the wound made admitted some fungus, which has brought about the death of the tree.

BUDDING ROSES IN SPRING (J. G. K.).—If by the spring you include May and early June, then our answer is, "Yes." You can bud stocks that were planted last year very well in May if you can procure ripe buds. Your best plan is to purchase young pot Roses of the newer sorts, which most Rose-growers have for sale in May, and these would give you six to ten buds each. When you speak of hard-wooded subjects being budded in the spring, we presume you really mean "grafted," and, of course, this is done in the month of March. While we would not say that Roses could not be grafted outdoors in a similar manner, yet we do not advocate its practice, as it is not at all a success.

SELECTION OF ROSES FOR A LARGE BED (Giles).—You will be able to make a splendid bed of Roses on the plot of land 39 feet by 8 feet. This would take four rows of bushes planted about two feet apart each way. In No. 1 row we have arranged all tall growers, and these, of course, would be placed at the back of the bed that is furthest away from the path. No. 2 row would be strong growers, but not quite so much so as No. 1 row; No. 3 row dwarfier than No. 2, and No. 4 quite dwarf. We have arranged them in the order they should be planted, commencing at the left end of the row each time. No. 1 row—Avoca, Mme. L. Constantine, Duke of Edinburgh, W. A. Richardson, Mrs. C. West, Sarah Bernhardt, La Tosca, Florence H. Veitch, Gustave Regis, Dr. O'Donel Browne, Ferniehurst, Margaret Dickson, Hugh Dickson, Bouquet d'Or, J. B. Clark, Lady Waterlow and Ulrich Brunner. No. 2 row—Mrs. Sharman Crawford, Laurent Carle, Betty, Lady Ursula, Gustav Grunerwald, Frau Karl Druschki, General Macarthur, Mme. A. Chatenay, François Coppee, Pharisier, President Vignet, Mrs. John laing, Captain Hayward, Lady Pirrie, Dorothy Page-Roberts, Charles Lefebvre, Caroline Testout and Mrs. H. Stevens. No. 3 row—Antoine Rivoire, Lady Hillingdon, Augustine Guinoisseau, Edward Mawley, Mme. Ravary, Lady Ashtown, Prince de Bulgarie, Mrs. A. Tate, James Coey, Richmond, Cissie Easlea, Lady A. Stanley, Joseph Hill, Duke of Wellington, Duchess of Wellington and Mme. Jules Grolez. No. 4 row—Melody, Mrs. W. C.

Miller, Entente Cordiale, Rose Queen, Chateau de Clos Vougeot, Paul Lédé, Amateur Teyssier, Victor Hugo, A. R. Goodwin, Mme. Segond Weber, George C. Waud, Marquise de Sinety, Mme. Antoine Mari, Fisher Holmes, Le Progrès, Lieutenant Chaure and Mrs. Aaron Ward. This would be a total of seventy plants. For the pillars we suggest the following: Effective, Climbing Mrs. Grant, Richmond, *American Pillar, *Leontine Gervaise, Zephyrine Drouhin and Elise Robichon. The two marked with an asterisk would come either side of the path opening. These are all popular Roses, with a good blending of colour and of easy culture. When planting, give each plant a handful of bone-flour just beneath the surface soil.

MISCELLANEOUS.

TREATMENT OF SOIL (H. A. Fordham).—We think your soil is probably somewhat sour and in need of lime. As you are going to take all the Carnations out, we think it would be advisable to put on a good dressing of lime now, using half a bushel of quicklime to each square rod, placing it in heaps and covering them with soil for about a fortnight, then spreading and digging it in. In addition to this, we should be inclined to give a dressing of sulphate of potash if you can obtain it in the spring, using 1½ oz. to the square yard. We do not think the millipedes will do very much harm to the woody roots of Roses, and would not use the lime there, but the sulphate of potash dressing alone. If your bush of La Tosca is still alive, though dormant, we would leave it to see if it will make new growth next spring. If all the wood is dead, dig it up and burn it. Of the Roses you name we can recommend the following for general garden use: Gustave Regis, Duchess of Wellington, Lyon, Mrs. David McKee, Lady Hillingdon, Mrs. Aaron Ward, Lady Alice Stanley and G. C. Waud. Other good varieties of comparatively recent introduction, but not now expensive, are Entente Cordiale (Pernet-Ducher's), Miss Cynthia Forde, General Macarthur, Arthur R. Goodwin, Lady Battersea, James Coey and Lady Pirrie.

VARIOUS QUESTIONS (Rustic).—"Color Standards and Color Nomenclature," by Robert Ridgway, published by the author in Washington, U.S.A., will give you the charts you desire. Clarkia is named after Captain Clarke, who accompanied Captain Lewis in his journey up the Missouri and to the Rocky Mountains in 1884. He flourished at the end of the eighteenth and the beginning of the nineteenth century. The name was given by Pursh, who, however, spelt it Clarcia. Pulchella means pretty or beautiful, and integripetala refers to undivided petals as opposed to those forms with the margins of the petals much cut up. Lupine is supposed to be derived from Lupus, the wolf, and was the name used for the plant by Virgil and Pliny. It is supposed to refer not to the form of the flower, but to the idea then prevalent that it devoured the fertility of the soil. Your derivation of the term Larkspur is probably correct. Shirley Poppies were first raised by the Rev. W. Wilks, the well-known secretary of the Royal Horticultural Society, from a single wild plant in his garden. He carefully "rogued" the seedlings year by year, and so established the beautiful race now in existence, and at the same time generously gave the seed to as many as asked for it. His garden was at Shirley Vicarage, Croydon, and he still lives at Shirley.

NAMES OF FRUIT.—Mrs. Crosse.—1, Allington Pippin; 2, Hanwell Souring; 3, Wyken Pippin; 4, Wellington; 5, Lane's Prince Albert; 6, King of the Pippins; 7, Beauty of Hants.—J. H. Pepper.—1, Beauty of Kent; 2, Pott's Seedling; 3, Annie Elizabeth; 4, Mère du Ménage; 5, Pine-apple Russet. Pears: 1, Pitmaston Duchess; 2, Marie Louise.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

To say that the fortnightly meeting held on December 1 was distinctly above the average of normal times for the season of the year is to indicate that every available inch of space in the great exhibition hall at Vincent Square was packed to its utmost extent, visitors, too, being in like proportion. Doubtless to some extent the oncoming exhibition of winter-flowering Carnations was responsible, though the announcement of a fruit show to replace in some measure that usually held in October was by far the greater attraction. The collections of fruit, indeed, were the outstanding feature of a great meeting, fruit of the highest excellence and finish, that did ample justice to this increasingly valuable British industry. Another imposing feature was a great bank of Begonia Gloire de Lorraine from a private garden, which deservedly gained a gold medal. It was probably the finest thing of its kind yet staged. The Orchid and floral committees each gave an award of merit to one novelty.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), Sir Harry J. Veitch, Sir Jeremiah Colman, and Messrs. J. O'Brien, J. Wilson Potter, F. J. Hanbury, R. Thwaites, R. A. Rolfe, W. Cobb, F. M. Ogilvie, J. Charlesworth, C. H. Curtis, W. H. Bound, A. Dye, J. E. Shill, W. H. White, S. W. Flory, W. Bolton, Gurney Wilson and R. B. White.

Only a few groups of Orchids were staged, though they included many beautiful kinds. Messrs. J. and A. McBean, Cooksbridge, had a variety of hybrid Odontiodas, some very beautiful Odontoglossum crispum, the crimson and white Cymbidium Alexanderi, Lælio-Cattleya Auto

Doin and the very old though useful and distinct Zygopetalum Mackayi. Cattleya Fabia alba was also very beautiful and chaste-looking. Silver Banksian medal.

In a rather extensive display Messrs. Stuart Low and Co., Jarvisbrook, Sussex, had a very fine example of Vanda sanderiana, some beautiful sprays of V. cærulea, Cattleya labiata reedleyensis (a lovely white form), Lælio-Cattleya luminosa (of orange and crimson colouring), Sophro-Cattleya Doris (intensely rich cerise), Cattleya aurea, C. Raphaelæ alba and Lælio-Cattleya Eldorado gigas, which was very fine. The new Brasso-Cattleya Pink Pearl (see "New and Rare Plants") was also shown by this firm. Silver Banksian medal.

Messrs. Sander and Sons, St. Albans, showed very fine specimens of Cypripedium Sanderæ, Cattleya Dusseldorffii Undine, Cattleya Fabia alba, Lælio-Cattleya primulina (yellow sepals and crimson brown, much-veined lip), together with Cœlogyne mooreana (white) and a pleasing variety of Odontoglossums. Cypripedium Corsair was also among kinds of distinctive merit. Silver Flora medal.

Messrs. Charlesworth and Co., Hayward's Heath, had a few very beautiful and choice plants, the more conspicuous being Cattleya Venus, whose sepals and petals have an almost unique blending of salmon and pale rose, a remarkable combination which attracts immediately, the crimson brown lip being in fine contrast. Miltonia bleuana was well represented; Lælio-Cattleya Bella alba, very chaste; Odontioda Brewii, intense crimson; Oncidium cheiroporum, small yellow flowers; a variety of Odontoglossum crispum; and Cochlidia miniata, whose inflorescence of pinky red flowers was very charming. Silver Flora medal.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. E. A. Bowles, R. Hooper Pearson, J. Green, W. J. Bean, R. C. Notcutt, G. Reuthe, C. Blick, J. W. Moorman, F. W. Harvey, C. R. Fielder, J. Hudson, J. W. Barr, W. Howe, J. F. McLeod, W. H. Page, J. Jennings, W. Bain, W. Cuthbertson, J. Dickson, C. Dixon, A. Turner, J. T. Bennett-Poë, Charles E. Shea, Charles E. Pearson, W. P. Thomson, E. H. Jenkins, G. Paul and W. G. Baker.

Messrs. Allwood Brothers staged an admirable lot of Carnations, making a great centre-piece of Wivelstfield White, which was in superb form, the handsome flowers showing well. Fairmount (heliotrope self), Mary Allwood (cardinal pink), British Triumph and Princess Dagmar (crimson), May Day (pink), Champion (scarlet) and Philadelphia (cerise pink) were others in a notable lot.

Messrs. Stuart Low and Co., Enfield, showed a full-length table of Begonias and Carnations, the former typified in such as Optima (pale orange), Rosamund (cerise), Exquisite (salmon and white) and Emita (deep orange). The Carnations, displayed in goodly stands, included Snowstorm (white), British Triumph, Princess Dagmar, Mrs. Mackay Edgar (a superb pink in a central place) and Champion. Gorgeous (deep cerise) was also very fine.

Mr. C. Engelmann, Saffron Walden, had a table of Carnations, occupying the whole of the western end of the hall, a great number of varieties being staged. The exhibit was rather in the nature of a collection, and we fancy we have seen better material from this well-known exhibitor. Pioneer (cerise), Lady Northcliffe, Red Sport Lady Northcliffe, Bella (orange and white), Benora (fancy), Yellow Stone, Gorgeous, Scarlet Carola, Sunstar (yellow, very good), Carola (very fine), Variegated Carola, Mrs. C. F. Raphael (scarlet), Rosette and Enchantress Supreme were others in a large lot. Some eighty varieties were staged.

Mr. Clarence Elliott, Stevenage, had a nicely grown plant of Iris stylosa in flower, also a few plants of Soldanella pusilla alba, with gentian flowers, in a collection of alpine and rock shrubs.

Mr. G. Reuthe, Keston, Kent, showed a large collection of alpine (not in flower), together with a nice assortment of Nerines, Iris Vartani, I. alata, the lovely Crocus marathonsius (very pure white), C. media, C. longiflorus (rosy mauve), C. ochroleucus (white, yellow base) and C. cartwrightianus (white, with purplish lines at base and brilliant orange stigmata). Hardy Heaths were also shown.

Mr. A. F. Dutton, Iver, Bucks, arranged a large collection of Carnations in ornamental baskets; indeed, we thought the latter overdone and too much in evidence. The flowers were, however, very fine. May Day, Beacon, Enchantress Supreme, Sunstar, White Enchantress, White Wonder, Queen Alexandra (fine pink) and Princess Dagmar (crimson) were the best.

The Misses Hopkins, Shepperton-on-Thames, set up planted boxes of select alpine, a revival of an idea in vogue many years ago. Saxifrages, Dianthi, Gentians, Thymes, Campanulas, Primulas and many others were employed in this way with pretty effect.

Mr. L. R. Russell, Richmond, set up a large exhibit of berried shrubs—Skimmia, Aucuba, Crataegus and the like. Begonias of the Gloire de Lorraine type were also shown.

The Misses Tate and Tanner, Bushey Heath, Herts (gardener, Mr. Streeter), exhibited a superb group of winter-flowering Begonias, in all probability the finest of its kind yet staged. The majority of the plants were in specimen form, particularly those of the Gloire de Lorraine section, of which the group was chiefly composed. These were in the various shades of pink and the white-flowered forms, the plants being 2½ feet high and the same through in the majority of instances. Cliban's Pink, Altrincham Pink and Miss Cliban, of the winter-flowering set, were also in evidence, and afforded variety and importance to a group lacking nothing in culture and good staging. A gold medal was deservedly awarded.

THE GARDEN.

No. 2248.—VOL. LXXVIII.

DECEMBER 19, 1914.

NOTES OF THE WEEK.

Kew Guild Men in the Army.—A list of members of the Kew Guild serving with His Majesty's Forces is in course of preparation for publication in the next Journal to be issued in January. Information, to include the name of the regiment to which they are attached, from members or their friends should be sent to Mr. A. Osborn, 191, Kew Road, Richmond, Surrey.

The Christmas Daisy.—Only when we get a mild late autumn is the beauty of *Aster grandiflorus* seen in the open ground. This is unfortunate, as it is one of the most beautiful species of the genus. A good plan is to treat it as a pot plant, giving it the same conditions as Chrysanthemums, either growing it on in pots or lifting it from the ground early. In this way it can be had in perfection, when its beautiful blue flowers make a striking contrast to white and yellow Chrysanthemums for decorating the conservatory. Its late-flowering qualities also make it very valuable for cutting.

A New Oil-Seed from South America.—The current issue of the *Kew Bulletin* contains some interesting particulars of a new oil-seed from South America. This is the seed of the tree known as *Osteophloeum platyspermum*, or *Myristica platysperma*, a native of North-West Brazil, where it was discovered by Spruce in 1852. The fat obtained on extraction with petroleum ether is white and crystalline, with a slight smell, and the seeds give the very high yield of 55.2 per cent. of fat. Now that there is such a large demand for all kinds of vegetable fat, the discovery of this new source should prove of considerable commercial value. At present the Kew authorities have no information as to the quantity of seeds likely to be available.

The Dean Hole Memorial Medal.—It is with considerable pleasure we learn that the National Rose Society, at the annual meeting held on Thursday of last week, conferred the Dean Hole Memorial Medal on Mr. C. E. Shea of Foot's Cray, Kent, whose portrait we publish on this page. On two separate occasions Mr. Shea has acted as president of the society, viz., during 1905-6 and 1913-14. His services in the interests of the Rose and the National Society have extended over a very long period, and his genial and courteous manner has made him one of the best loved and most highly esteemed men in the horticultural world. The Dean Hole Memorial Medal is the highest honour that the National Rose Society can confer, and everyone who is privileged to know Mr. Shea will agree that he thoroughly deserves this distinction.

Planting Trees and Shrubs.—Although November is undoubtedly the best month of the whole year for planting practically all kinds of deciduous

trees and shrubs, including fruit trees, it does not follow that they cannot be successfully planted at any other time. Providing the weather keeps open and the soil is in fairly good working condition, such trees and shrubs can be safely and successfully planted at any time from early November until March. We mention this now because, during recent years, so many lecturers and other horticultural instructors have emphasised the desirability of November planting, with the result that many amateurs have erroneously come

of soil, and placed in a little warmth. If this is continued at intervals, a good supply will be maintained; or if a frame is placed over the bed, it will give a good quantity before the Mint in the open ground is ready.

Fruit for Christmas.—Notwithstanding the war, there is likely to be an abundance of nearly all kinds of fruit for Christmas, with the exception of dried Dates and Figs and crystallised fruit. Covent Garden supplies are excellent, and owing to the fact that they cannot be shipped to Germany or Austria, Pineapples and Bananas will probably be cheaper than for some years past. Pineapples have never been of better quality. Nuts, too, are plentiful, the much sought after Brazils being cheaper than for some years past.

***Pyracantha angustifolia* for Winter Beauty.**—When this plant was originally introduced under the name of *Cotoneaster angustifolia*, it was usually planted as a shrub in the open, and rarely with satisfactory results. On one or two occasions, however, fruiting specimens were sent from France to this country, and such was their beauty that cultivators were stimulated to fresh efforts in their endeavour to find the conditions suitable for its culture. This object has now been attained, and as a wall shrub it promises to become as useful as its older relative the *Pyracantha* of gardens, *P. coccinea*, or *Cratægus Pyracantha* as it is also called. *P. angustifolia* grows at least 12 feet high and bears narrow, oblong, evergreen leaves up to 2 inches long and one-third of an inch or more wide, the flowers being white and followed by a profusion of orange-coloured berries, which ripen in October. It is a native of Western China, and was introduced to this country by Lieutenant Jones fifteen years ago. It should be planted in rather light and well-drained loamy soil at the foot of a south, west or east wall, and in such a position it may be expected to provide a very cheerful picture from October to January or later. As it is less hardy than the common *Pyracantha*, it should not be planted in places where the last-named shrub is known to be a failure.

***Rosa spinosissima* (Scotch or Burnet Rose).**

Last summer we had the pleasure of finding this growing wild on a common not far from Worthing, where on a dry, poor and gravelly soil mingling with Heather, wild Sage and the rapidly oncoming Bracken, it, though brought into subjection, constituted a very pretty picture in satiny white. Reduced by circumstances into comparative dwariness—it was often of less than a foot high and rarely more than 18 inches—it was still suggestive of good use, and we pictured it in the rock garden similarly starved to produce effect.



MR. C. E. SHEA, WHO RECEIVED THE DEAN HOLE MEMORIAL MEDAL FROM THE NATIONAL ROSE SOCIETY LAST WEEK.

to regard it as the only planting-time. The same remarks apply to nearly all kinds of hardy herbaceous plants, hence those who wish to plant from now onwards need not refrain from doing so.

Fresh Mint for Winter Use.—This is always preferred to dried Mint, but seldom during the winter and early spring months is the supply of this useful herb equal to the demand. Pieces of roots should now be lifted, put in shallow boxes

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Late-Blooming Roses and Oriental Lilies in South-Western Scotland.—The Rev. David R. Williamson writes us as follows from Kirkmaiden Manse, Wigtownshire, on December 7: "Roses have flowered very late in my garden this year. Conspicuous among these have been Viscountess Folkestone, notable alike for its free-flowering capabilities, its charming pale salmon pink complexion and its exquisite fragrance—a Hybrid Tea of inestimable value, at least in my own estimation, and one that will not be soon superseded; Bouquet d'Or, perhaps the most precious of all the beautiful daughters of Gloire de Dijon, a plant of which has adorned a wall with a northern aspect for at least fifteen years; Margaret Dickson, by far the most aspiring Rose

is generally supposed to be a derivative from Melpomene."

Late-Flowering Kniphofias.—We have had a bed of the late-flowering Torch Lily (*Kniphofia aloides glaucescens*)—misnamed *maxima* in your note of the 5th inst., page 583—for about ten years, and every season in November it is the most striking plant in the nursery. The rains and night frosts that bedraggle the Michaelmas Daisies have no effect on it, and even now it is a fine mass of colour, as you will see from the spikes sent you under separate cover. It should be planted in masses of a dozen or more, in beds cut in the grass, and placed so that, when in flower, the heads show up against some dark evergreen or piece of woodland. Then it is extremely effective. It is odd that it should always flower so late, when there is no chance of setting seed; but it makes no show of spikes before September. We took a special interest in this family for some years, and raised a number of very pretty seedlings in which a long-



COPRINUS (AGARICUS) COMATUS, A FUNGUS THAT IS EDIBLE WHEN YOUNG.

that I possess, and that is saying much; J. B. Clark; Captain Hayward, which among crimson Roses is quite indispensable; and the supremely attractive Pharisæer. The variety last mentioned, I may incidentally mention, particularly attracted the attention and elicited the admiration of the Countess of Stair when she visited my garden a few years ago; and subsequently, at my suggestion, her ladyship (who is an assiduous amateur horticulturist) added this highly effective variety to her interesting collection at Lochinch Castle, where she also cultivates with marvellous success in her shady wild garden almost all the leading species of Oriental Lilies, especially the Himalayan *Lilium giganteum* and *L. auratum platyphyllum*. I may perhaps be permitted to add that a fine specimen of *L. speciosum magnificum* was flowering in my garden this season at the end of November, the latest I have ever seen it, at least in this region. This grand variety, which grows admirably in ordinary garden loam

flowering habit is secured. Perhaps Gold Else and Torchlight are the best known. These flower more or less continuously right through the summer and autumn, and both are extremely pretty for cutting in October, when there is very little else of this colour in the garden. Two October-flowering species are also worth wider cultivation—*breviflora*, which is pure yellow, and *Nelsonii*, which is scarlet. They have delightful grassy foliage, and when happy throw up flower-spikes in great profusion. Unique is a *Nelsonii* hybrid for which we obtained an award in 1912. It has flowers of a glaucous coral, without a touch of yellow, and is very handsome with the grassy *Nelsonii* foliage. A strong plant will carry over twenty spikes. Then *Kniphofia aloides glaucescens* comes last of all, a stout, bold grower, 4 feet high, with broad foliage.—R. WALLACE AND CO., Colchester. [The plants at Kew to which we referred in our issue for the 5th inst. are, or were, labelled *K. aloides maxima*. It, as Messrs. Wallace state, this is incorrect, we

may expect the Kew authorities to put the name right.—Ed.]

Agaricus comatus.—We have had—to mention—extraordinary crops of this most delicious of esculent fungi. They appear about the middle of November for a fortnight or three weeks upon a steeply sloping wooded bank above the river Vyrnwy. Curiously, they come only in one place—a strip down the bank about ten yards wide and perhaps twice as long. I have not found even isolated specimens elsewhere, though there are stretches of similar bank along the course of the river. It happens that down this particular strip of the bank were cast, in the spring of 1912, many loads of limestone rock for use on the river bank. Can this have caused the growth of *A. comatus*? I do not think they appeared previously, but cannot be certain, as we were not here till towards the end of November, 1911, and people whose interest has not been aroused do not notice such things. The soil is of the poorest, the timber chiefly Oak. The profusion of the crop is such that every two or three days while they last we can gather a dish of six or eight. I enclose a photograph of one of this year's groups—not nearly so fine as last year's, however, when we gathered many of which the pileus was over four inches in length, and some, I should think, nearly six inches. Is anything known of the conditions necessary to the growth of this fungus?—C. H. CUMBERLAND, *Plás Derwen, Llansantffraid, Montgomeryshire*. [We have submitted the above to our scientific expert, who writes as follows: "Agaricus comatus is the old name. It is now *Coprinus comatus*. Only quite young specimens should be eaten or used for making ketchup."—Ed.]

Banksian Roses: How to Make Them Flower.—In reading THE GARDEN for December 5, page 588, respecting Banksian Roses, I thought I would write to tell you that in my father's old rectory garden at Bonnington, Kent, we had a very old Yellow Banksian Rose tree which grew all over the south porch. In all the forty years he was there this old tree blossomed profusely, and I think I am right in saying that it never was properly pruned, its roots were never dug and never manured in all that time, and it grew in the coldest of cold clay soil.—ALICE S. ROLFE.

— It may interest your correspondent "A. B. Essex" to know there is a white Banksian Rose here which flowers profusely every year. It was planted nearly a hundred years ago by my uncle. It certainly carries out the theory that these Roses flower best when they receive little or no attention. This tree is planted in the grass close to the south wall of the house, not even in a flower border. Its roots must go under a gravel path and the lawn, as there are no flower-beds near. It covers most of the side of that wing, and is never touched, except to cut back shoots which grow too long and tie them in. We planted another Banksian Rose two or three years ago on a south wall in the kitchen garden; but the soil there is evidently too good, for though it has grown most luxuriantly and reaches to the top of the wall, it only has two or three trusses of flowers each summer. I must add that our soil here is very stiff clay, and we are about a mile from the sea.—MARY C. BOND, *Tyncham, Corfe Castle, Dorset*.

— I see a request in THE GARDEN for experiences with Banksian Roses. I have two

common ones, a yellow and a white. The white faces south and the yellow east. The white was a sheet of blossom this year, the yellow flowered fairly well; but, then, this year was marked by great floriferousness. However, by pruning regularly after they have flowered, they do sufficiently well in ordinary years. I have the old wood taken out. That may be wrong, possibly, if one wants flowers, but room must be made for the young wood. Twice when I ordered the common Banksian Rose I was sent Fortune's Yellow. I did not care for it. It is a shy bloomer, and drops many of the few buds it makes. But whereas a south wall is necessary to get the best results from the common Banksian, I found Fortune's Yellow did better on a north wall. It might be worth while to try growing it up a tree.—F. G. DUTTON, *Bibury Vicarage, Fairford, near Cirencester.*

— My experience leads me to the conclusion that to get Banksian Roses to flower well, it is best to let them run practically wild. I have seen them growing very well indeed in various aspects—north, south, south-west and east—somewhat protected in the last named; but on very poor soil and in a very confined corner of a shrubbery close to the house, about a foot from the gravel drive, they flowered most profusely. In the other aspects named they had plenty of root room. Quite open in other respects (as they were planted on houses with the lawns in front of them), they were kept well trimmed, but gave very few flowers indeed; in fact, one on the north aspect did not have any flowers. I might say that those planted on the south and south-west aspects (both the white and yellow) I did not have charge of, but I was there as undergardener for ten years and noticed them with very few flowers. The north and east aspects were in Sussex, the south and south-west in Surrey (at Dorking).—E. TRING.

Christmas Decorations: Some Suggestions.—

For the table: Red and yellow Tulips or Chrysanthemums in little black enamelled baskets for Belgian colours. Red and white Tulips, Hyacinths or Chrysanthemums and Violets, for English, French and Russian colours. A quaint and unconventional table centre, easily "kept going" all through Christmas-time, can be made with a tin or tray as foundation. On this crumple up irregularly some coarse-meshed wire-netting, leaving several depressions. Cover all with fresh moss and trails of Ivy, and in hidden receptacles containing water place Holly, Mistletoe, flowers, seedling Ferns, &c. In the centre sink a tiny oil lamp or "fairy light" to shine through the flowers and foliage. Border the whole with a garland of fine Ivy trails and (do not laugh!) frost over all with a sprinkling of coarse Epsom salts. For Christmas pictures from the illustrated Christmas numbers, an artistic border is quickly and easily made by tacking dried brown Oak leaves slightly overlapping each other on half-inch wide strips of brown paper. These have the effect of leather-work or carved Oak frames. Always carry each stitch across the midrib of the leaves, laying the tip of one leaf over the stalk of the preceding one and stitching both together. One stitch to each leaf is generally enough. For bare wall spaces, an effective trellis can be made by wiring trails of Ivy, interspersed with other evergreens. This is very ornamental for covering bare or unsightly walls, and is useful for decorating halls and schoolrooms for Christmas entertainments.—ANNE AMATEUR.

MR. E. MAWLEY AND THE NATIONAL ROSE SOCIETY.

IT was with very deep regret that the members of the National Rose Society learned, at the annual general meeting held in London on Thursday of last week, that Mr. E. Mawley, V.M.H., had felt compelled to relinquish the office of hon. secretary. This regret, however, was somewhat tempered by the enthusiastic election of Mr. Mawley as president for the ensuing year.

His association with Roses and the National Rose Society dates back a very long way. It was about the year 1875 that he first commenced to grow Roses at Croydon, and in 1877 he became co-hon. secretary of the National Rose Society with the late Rev. H. D'ombrain. When that esteemed rosarian died in 1905, Mr. Mawley took over the full duties of hon. secretary. He



MR. E. MAWLEY, V.M.H., FOR MANY YEARS HON. SECRETARY OF THE NATIONAL ROSE SOCIETY AND NOW PRESIDENT.

has endeared himself to all those who have had the privilege of meeting him since his official association with the National Rose Society, and has had the satisfaction of seeing it grow from a small association into the largest special floricultural society in the world.

In his younger days he was a very keen exhibitor at the society's shows, and so successful was he in taking prizes in the smaller classes that his friends used to affectionately refer to him as the "champion of lightweights." In 1885 Mr. Mawley moved from Croydon to Berkhamsted, a town that has been privileged to number him among its residents ever since. As an appreciation of his services to the National Rose Society the members unanimously bestowed upon him, in 1910, the Dean Hole medal, a special distinction which is awarded from time to time as occasion may arise.

In the past he has also been a very active worker on behalf of the National Dahlia Society, and for

several years was its president. Meteorology also claimed Mr. Mawley's attention, and for thirty years he was a member of the Council of the Royal Meteorological Society, and for two years secretary, ultimately becoming its president in 1904. The Council of the Royal Horticultural Society, in recognition of his services to horticulture generally, conferred upon him the Victoria Medal of Honour in Horticulture in 1904. Just what the National Rose Society owes to him perhaps will never be known; but we feel sure that everyone who is interested in Roses will regret that he has been reluctantly compelled to relinquish the hon. secretaryship, and will join with us in wishing him many years of further activity and enjoyment of the flower he loves so well.

ROSES IN YORKSHIRE.

(Continued from page 597.)

WHEN we look round at the many beautiful varieties of yellow and orange toned Roses our gardens contain to-day, it seems almost impossible to realise that only five years ago many of the best of these were not in existence. Duchess of Wellington, Mabel Drew, Mme. Charles Lutaud, Mrs. C. E. Allan, Lady Hillingdon, Mrs. Sam Ross, Lady Downe, Lady Greenall, Cissie Easlea and Sunburst, to name only a few, have all appeared since 1909. Six of the above I have only just planted, and am therefore unable to speak from practical experience; but I am confident that many of them will do well, and impatiently await their development next summer.

The yellow *par excellence* with me the last two years has been Duchess of Wellington, a fine, free grower that produces blooms in abundance of a charming yellow, splashed here and there with red, more especially in the bud state. Although this Rose is composed of very many petals, it has opened well, thus proving the exception to the rule of the Rose with few petals as *the* Rose for this vicinity; moreover, the blooms are held on fine, stiff stems and are deliciously fragrant. It is quite free from mildew. I cut a bloom on November 28, and still there were buds to develop if the weather chances to be kind to them.

Next comes Mme. Ravary, one of the hardest and best of any colour or variety; a very free bloomer that produces lovely golden buds, developing in the half-open state to deep apricot. When fully expanded it pales off rather too soon, but is in every way a most excellent Rose. Sunburst is rapidly becoming a favourite and, except for its extreme variableness of colour, is a good doer here. Harry Kirk, one of the finest of the pure sulphur yellows, is indispensable in this section for its decorative value, and it may be planted here with confidence. Mrs. David McKee, a fine Rose of a beautiful creamy yellow shade, produces freely blooms of an immense size and pleasing shape; it is in flower here throughout the season. It is vigorous, decorative, fragrant and gives one blooms fit for exhibition.

Among the coppery tones, the best with me have been Edu Meyer, a rather poor grower, but an abundant bloomer, and, moreover, the flowers last a very long time when fully expanded on the plants, continually providing a pleasing touch of colour in its own particular bed all the season; and Betty, to which I referred in my first

article. This is one of the indispensable decorative Roses, and belongs to the first dozen every amateur should order when he embarks upon the cultivation of the Rose. Its colour is made up of beautiful tones in copper, shaded golden. It is very vigorous, an excellent bedder, and has the added charm of fragrance.

It would be unpardonable to put Frau Karl Druschki anywhere else than at the top of the list in the white class. It has so many virtues and only one fault, in that it is absolutely without perfume. This is such a disappointment, because its wonderful size and shape and spotless purity of petal all make it so attractive for all purposes. It appears in the exhibition box, I suppose, more often than any other variety of any class or colour. It is a very free grower here, and is, happily, not seriously affected by wind and wet. One of my few standards is of this Rose, set in the centre

tints, however, but like it none the less for that. It produces large quantities of most decorative Roses, which last well on the tree, and is another variety always in bloom.

Juliet here is a Rose that is distinct and novel in both colour and growth; outside of petals old gold, inside vermilion. Growth is extremely vigorous. I confess I planted this with some hesitation; so many people like myself, amateurs, complained of being dissatisfied with the results. However, I pegged down the three long growths of which the plant consisted, and took about eight inches off the end of each when pruning. Judge of my surprised delight when I perceived buds in abundance coming along the entire length of each branch, and I had eventually no fewer than thirty-three Roses out or partially out in bloom at one time, and the effect in the centre of an oblong bed was most pleasing. The buds are

to the numbers of those that do well. My leisure time is extremely limited, and I am only able to indulge my love of Roses by leaving everything else in the garden to the tender mercies of a jobbing gardener.

Among the unsuccessful Rose-growers we find a great proportion of those who refer to planting Roses as "sticking them in." The man who "sticks" Roses in will never succeed in producing fine blooms, nor does he deserve to do so. It is just that extra trouble and extra barrow of leaf-mould to sprinkle over the fibrous roots when planting, and the plunging of the dried roots and growths into tepid water, seemingly unimportant details, which are great factors to the Rose tree, likewise the subsequent pruning and attention to various pests, &c. Finally, I believe most emphatically in the value of liquid manure for Roses, from the bud stage onwards. A generous supply after heavy rain goes far towards maintaining colour in the blooms. E. WATERS.

Roundhay, near Leeds.



THE SMOKE PLANT (RHUS COTINUS) IN AUTUMN. THIS HARDY SHRUB WILL THRIVE IN ALMOST ANY SOIL.

of a bed of Gloire de Chedane Guinoisseau, which has given to it a perfect finish.

British Queen I have only had one year, and it has done well and been continuously in bloom. The flowers are of fine size and very fragrant. I must admit that I had quite a number of blooms of very bad shape, and it has been rather badly affected with mildew; further, it is whispered that the best results from British Queen are forthcoming from maiden plants. If that is so, it will with me have to give place to Mrs. Herbert Stevens, which up to now I have not grown, but find it does very well in my district, and I have planted it this autumn.

Viscountess Folkestone is, of course, not a white, but does so well with me that I mention it here as a Rose that is reliable in a Northern climate. Some of the catalogues describe it as "creamy pink, shaded salmon." I get none of the salmon

vigorous and nearly as large as Walnuts. When open it is a large, full Rose of powerful and delicious fragrance. I find that many amateurs allow this to grow tall, and consequently get only four or five blooms during the season. It is a Rose that wants plenty of room, and its only fault is a tendency to mildew on the thorns and nowhere else. The foliage is clean.

I find that Dorothy Perkins and its white sport, also Hiawatha, Excelsa, Alberic Barbier and Tausendschön, are reliable and free among the climbers here. Crimson Rambler is an absolute failure so far as growth is concerned, and I am gradually replacing it with Excelsa.

In conclusion, as a man of Kent living in Yorkshire, I would say that, so far from being disappointed with my experiences in the cultivation of Roses, I am keener than ever to go on, profiting by mistakes in the selection of varieties and adding

THE SMOKE PLANT (RHUS COTINUS).

DURING the autumn months there are few more attractive hardy shrubs than the Smoke Plant (*Rhus Cotinus*). At that season the feathery inflorescences impart to the shrub a very peculiar appearance that, at a distance, looks somewhat like a cloud of smoke, this effect being well shown in the accompanying illustration. Although introduced to this country as long ago as 1656, one does not often find this shrub in gardens, a fact that is rather difficult to understand. It is perfectly hardy and will thrive in almost any soil, but, as it makes rampant growth, it should be planted where plenty of space is available. According to Nicholson, the preparation known as Young Fustic is obtained from this *Rhus*, which, in some districts, is known as the Yellow Dye-wood.

SHRUBBERY BORDERS IN WINTER.

THESE are rarely treated as they should be in autumn and winter time. Shrubberies are to a dwelling-house what frames are to pictures, in a sense, only they are of much more importance. There is a very economical way of feeding the shrubs without using any ordinary manures. Where there are trees of a deciduous character in a garden, the leaves from them get blown on to the shrubbery borders, and in nearly every instance the leaves are raked off and taken to a common rubbish-heap, and the surface soil among the shrubs dug up. In the case of old shrubberies this is wrong treatment. The digging makes the shrubbery look neat and well cared for, but it is at the expense of the welfare of the shrubs, as all their surface roots are destroyed and the others are not enriched. In the case of young shrubs, where there is ample space between them not occupied by roots, the digging will have a beneficial

effect. In dealing with other shrubberies, the leaves collected among the stems of the shrubs should be picked out, all hollows filled with the leaves, and the latter covered with a thin layer of soil from another part of the garden. No more work than the digging of the border will be entailed, the shrubbery will present a very neat appearance, and the shrubs will greatly benefit, as their roots will enter the mulch and form a network. The soil put on prevents the birds and wind disturbing the dry leaves, and also assists in the process of decay. Where the leaves are too numerous, the surplus can be used for forming leaf-mould.

AVON.

THE MAIDENHAIR TREE

(GINKGO BILOBA.)

ALTHOUGH a well-grown specimen of this tree never fails to elicit admiration from anyone interested in gardening, it is seldom that we see young trees planted. It is true that they are rather slow-growing, but the same may be said of a good many others that are much more frequently planted, although not so beautiful in appearance. The Maidenhair Tree is quite hardy in the Southern and Western Counties of Great Britain, where it will thrive in almost any good garden soil. In France trees that have attained a good size and age produce fruits fairly regularly, but it is not often that these are borne in this country. It is a coniferous tree, though deciduous, and one of the oldest in existence, remains having, I believe, been found in coal measures in some parts of the world. It was introduced to this country from Northern China in 1754, and is often known under its old botanical name of *Salisburia adiantifolia*. Its garden name is derived from the resemblance of the leaves to the pinnæ of some of the larger *Adiantums* or Maidenhair Ferns.

G. B. D.

SWEET PEAS IN POTS.

FINER and earlier blooms are secured from plants grown in pots during the winter months than from those raised in spring. Such has been my experience. Of course, other cultivators may not agree, yet I think many will. I depend entirely on the basal shoots that grow on the young plants for the finest flowers, and these basal shoots should be encouraged to grow strongly from the latter part of December onwards. The seeds are sown in September or, at the latest, before the middle of October. Two seeds are sufficient for a $3\frac{1}{2}$ -inch pot, and one seed for a 3-inch pot. Good fibrous loam is used, with equal parts of leaf-soil and well-rotted manure placed in the bottom of the pots. Crocks are not needed if the pots are placed on ashes or boards. The pots are placed in a cold frame, the soil kept in a uniformly moist condition, and, when the young plants appear, air is admitted in abundance and the plants exposed to full sunshine.

Feeding at this stage is not necessary; the rotted manure in the bottom of the pots affords the plants all the sustenance they need. They may be retained in the frame all the winter, but I prefer to place them on a shelf in a greenhouse about 1 foot or 15 inches from the roof glass, and where air can reach them in abundance during fine weather. Late in November the plants have attained a height of 7 inches; they are not staked or kept in an upright position, but allowed to depend from the sides of the pots towards the light. When left in this way, strong basal shoots soon begin

FLOWERS FOR CHRISTMAS DECORATION.

ALTHOUGH Holly, Mistletoe, Laurel and other evergreen shrubs still play an important part in our Christmas decorations, there is a rapidly increasing tendency to incorporate with these the numerous flowers that are now available at this season. Improved methods of cultivation and the introducing or raising of new types of plants that naturally flower during the winter months have, no doubt, had a great deal to do with this change. This year, owing to the exceptionally mild weather, there should be an abundance of most greenhouse winter-flowering plants, because strong artificial heat has not been necessary. Even in the outdoor garden such flowers as Christmas Roses, *Irises stylosa* and *reticulata*, *Snowdrops*, *Wallflowers*, *Violets*, *Daisies*, and possibly a few *Roses* will be available for cutting at Christmas; but it is on the indoor kinds that we must rely for sufficient to create really good effects. As cut flowers there are few kinds to equal the Perpetual-flowering *Carnations*. About twelve or fifteen years ago these were only to be found in a few gardens; now they are grown in startlingly large quantities for market purposes, and there are few private gardens in which a collection cannot be found. As they are to be had in several shades of pink, crimson, scarlet and white, they lend themselves well to nearly all kinds of decoration, and look particularly charming under artificial light. *Chrysanthemums*, especially the small double varieties and the singles, are becoming increasingly popular. There are now some delightful shades of bronze, yellow, crimson, pink and pure white, and nearly all mix well with evergreens where a bold effect is desired. For filling large vases or pitchers for standing in the corners of halls or corridors, the large-flowered *Chrysanthemums* are very useful, and they can be obtained in a sufficiently wide range of colours to suit almost any scheme. *Violets*, *Paper-White Narcissi*, *Scarlet Duc Van Thol*



THE MAIDENHAIR TREE (GINKGO BILOBA) AT KEW.

to grow as stated. If grown in borders under glass, the soil is deeply broken up and some well-rotted manure mixed with it. If grown in large pots, these are filled with fibrous loam, a small quantity of leaf-soil and some rotted manure. In such mixtures the plants grow steadily and sturdily, and rarely cast their first flower-buds. Other kinds of stimulants are not given until the plants commence to flower, as I believe it to be a mistake to force growth in the depth of winter. Plants intended for the open borders should be replaced in the cold frames early in February, and be well hardened before they are put out in April.

The plants must not be subjected to high temperatures nor to frost.

G. G.

Tulips, *Lilium longiflorum*, *Arum Lilies* and *Poinsettias* are other kinds which are grown in quantity in most good gardens, and which will also be obtainable in the market should it be found necessary to purchase them.

Of pot plants there are some very delightful kinds to select from. Perhaps the most charming and useful of all is the dainty pink-flowered *Begonia Gloire de Lorraine*. This can be had in many sizes, from a tiny plant a few inches high to a floral pyramid that measures nearly two feet from base to summit, as well as in baskets that are suitable for hanging in almost any position that may be necessary. This *Begonia* looks exceptionally well under artificial light, and may be effectively

used for table decorations in conjunction with pink Carnations. There is also a white-flowered form of it, and this contrasts well with scarlet Carnations or Tulips. Although Christmas is a little early for Cyclamen, there is certain to be a fair quantity this year, owing to the exceptionally mild weather. The flowers of pure white and shades of pink can be used in a cut state if desired, though I think they always look better on the plants. Greenhouse Heaths of several kinds are always welcome for decorating large tables. *Erica hyemalis* is a rather tall, erect plant with tubular-shaped pink and white flowers, but *E. gracilis* is usually the most popular, owing to its closer resemblance to the Heather of the moors. It is grown for market in little pots, where it forms a veritable bush of fragrant flowers. Larger sizes are also grown, but it is the small specimens that seem to be most appreciated. H. H.

THE LUPINES.

DURING the late spring and summer months, when the whole garden is a blaze of bizarre colours, the modest charms of the various kinds of Lupines are sure of a universal and cordial welcome. Their stately spikes of blue and white flowers form pyramids of these quiet hues in large and small gardens alike, and even under the trying conditions of town life, while their Palm-like foliage is ever a source of wonder to children and soothing to those who have long since passed the happy days of childhood.

The ordinary form of the herbaceous Lupine known as *Lupinus polyphyllus* has been grown in our gardens almost from time immemorial, yet it is still one of the best and most generous hardy plants that we have. Its flowers are a mixture of porcelain blue and white, a combination that is not too common among our hardy flowers. There is now a variety with pure white flowers which is useful under some conditions; and during recent years hybridists have raised a number of sorts with flowers of old rose or dull pink colour, so that with these plants alone a varied display can be obtained in late spring and early summer, and again in the autumn. To secure flowers at the last-named season, however, it is necessary to cut down the plants almost level with the soil as soon as the first display is over, and subsequently give them a rather heavy mulching with manure and generous supplies of water.

Of quite different habit is the so-called Tree Lupine, *Lupinus arboreus*. This is an ideal plant for growing in rather poor soil, as this semi-starvation tends to harden the shoots, which are thus able to withstand the frosts of winter. It forms a bush from 5 feet to 8 feet high, and during early summer is transformed into a cone-shaped mass of brilliant gold. The leaves of this Lupine

are similar in shape to those of the herbaceous kind, but smaller and of more silky texture. In addition to the golden-flowered type there is a beautiful white variety named Snow Queen; but this, however, does not, in most gardens, flower so lavishly as its prototype. Young plants of the Tree Lupine frequently grow from self-sown seed, and if they survive the first two winters it is rarely that they are sufficiently injured by frost as to be killed outright, at least in the Southern and Western Counties of England.

The annual Lupines are of comparatively small stature, and give us flowers in late summer and early autumn, when the more stately kinds have finished their first display. They can be had in a



THE HERBACEOUS LUPINE (*LUPINUS POLYPHYLLUS*). THIS IS ONE OF OUR BEST HARDY FLOWERS AND MAY BE PLANTED NOW.

variety of colours, and in heights ranging from 6 inches to nearly 2 feet. S.

THE RED VALERIAN AS A WALL PLANT.

ALTHOUGH not usually regarded as a plant suitable for growing in the crevices of a dry wall, the Red Valerian, as will be seen in the accompanying illustration, is well adapted for this purpose. For many years a great favourite in our best English gardens, this plant was until recently in danger of dying out, except in a few strictly rural cottage gardens, where the passing of time makes but little change. During the last decade, however, several varieties with brighter-coloured flowers have

been raised, and it would appear as though the Red Valerian was about to regain some at least of its former popularity. In the Round Tower Gardens at Windsor Castle this Valerian has in several places established itself in the retaining walls, the plants forming imposing tufts of leaf and stem that in June are transformed into masses of the rose red flowers.

SEASONABLE NOTES ON VEGETABLES.

Globe Artichokes.—Cut down the old flowering stems and remove all decaying leaves. Some protection from frost must be provided in the shape of freshly gathered leaves, 1 foot or so deep, around the stems, covered with long litter to prevent the leaves being blown away.

French Beans.—Make a sowing of five seeds in a 4-inch pot in any light compost, and place the pots in a warm house—stove, Cucumber or forcing house—in a temperature of not less than 60° by night. Directly the plants show above the soil, give them a position close to the glass in the same house to prevent the growth being drawn up weakly. As the pots become full of roots, transfer the plants to 7-inch pots, keeping them low in the pots to enable the plants later on to have a top-dressing of half-decayed horse-manure and leaf-soil, which encourages surface roots. Carefully water the plants so that they do not receive too much or too little. If the former, the roots become damaged and quickly induce the leaves to turn yellow. If, on the other hand, the roots are kept in too dry a condition, red spider quickly takes possession of the leaves, and little progress is then made. Any good forcing variety, like *Ne Plus Ultra* or *Osborne's*, answers better at this time of the year than the larger-podded sorts.

Broccoli.—To protect the plants which produce heads later on, they should be heeled over to the north by taking out a spit of soil on that side of the plant, gradually heeling it over until it lies almost flat in the trench. The soil from the north

side of the next plant will be used to cover the stem of the next, and so on, until the row is complete. Be sure that the stems are securely covered with soil, as it is this part of the plant that suffers by the action of frost, especially if the growth made during the summer has been gross.

Chicory.—Lift a sufficient number of roots and place them thickly in deep boxes or beds, where they are usually induced to grow, and blanch for salads. Any warm, moist position will suffice, and blanching is easily done by covering the plants with inverted pots.

Seakale.—Continue to place roots in the blanching quarters to maintain a regular supply of this. Where a Mushroom-house does not exist, a large box in the stokehole will suffice or a bed under

the greenhouse stage, with light excluded, will answer well. Sufficient moisture at the roots is necessary to induce quick growth, or the Seakale will be tough instead of being succulent as it should be. Freshly gathered leaves answer well for blanching, as they withhold the moisture and thoroughly exclude light and air.

Potatoes.—Early varieties should be placed in sprouting boxes in a cool, frost-proof shed, where they will be ready for the first plantings in frames or pots in the New Year. Indeed, this is a much better way of keeping all the first and second early tubers than in heaps, where they are liable to push into growth, whereby the tubers are weakened. The first shoot on a Potato, properly prepared, is undoubtedly the most essential to success. I am afraid the preparation of the seed Potatoes is a phase in the garden much neglected or, perhaps, in some quarters, little understood. It is common practice to sort out the seed tubers at digging-time, throw them in a heap in a shed, cellar, or clamp in the open, and forget all about them until they are required next year.

Herbs such as Mint, which die down annually, should have the tops neatly removed, covering the surface of the bed with half-decayed leaves, 3 inches thick, which not only protect the roots from severe frost, but enrich the soil and encourage vigorous growth next spring, besides giving to that part of the garden a tidy appearance.

Parsley in Frames should be well ventilated on all favourable occasions to prevent damp affecting the leaves or checking the growth, as this is an indispensable crop at this season of the year.

Mustard and Cress may be sown in small quantities and often to prevent a break in the supply. In boxes without a covering of soil is the most convenient method. When the seed is covered with soil, the grit is difficult to remove by washing.

Swanmore, Hants. E. MOLYNEUX.

FRUIT NOTES.

Washing and Spraying.—Although it has been proved to the point of demonstration that the efficient washing and spraying of fruit trees during their period of winter rest are advantageous, there are still many growers who will not take the trouble to practise them. If this only redounded to their own disadvantage it would not matter a scrap, but it should be borne in mind that careless or ignorant cultivators propagate pests for others, since the enemies spread from the dirty to the clean cultures. No effort ought, therefore, to be spared to persuade everyone who goes in for fruit to adopt the best measures of repressing the many insects by which the plants are attacked. When the trees are at rest it is easy to thoroughly scrub the bark to the full accessible height and to spray the remaining portion of the tree with a caustic soda wash; and if this is followed up for two or three seasons the effect in the appearance of the bark will be remarkable; and not only that, but

the tree will be in far superior health, and consequently infinitely more capable of bringing crops to perfection. The solution ought to be well brushed into all nooks and crannies of the rough bark and into the forks with a view to ensuring the death of lurking insects and, if possible, the destruction of any eggs that may have been deposited therein; but the latter is not readily achieved. Whether a caustic wash is being used through a sprayer or with the aid of a brush, the operator must guard the hands with gloves, wear old clothes and a soft, wide-brimmed hat, which will tend to reduce the probability of the burning spray blowing back into the face. If it is deemed imperative that the younger shoots carrying excellent buds shall be scrubbed, the worker must exercise particular care to proceed in the same direction as the buds point, or many will be dis-

Planting.—This important work will be practically at a standstill from the present time onwards to the end of January, not because it cannot be successfully accomplished at this season, provided the weather is favourable, but because the weather is so uncertain that it is risky to put such tasks in hand. It is always possible on any day that a long spell of frost will set in, and it is most undesirable to have a lot of trees waiting to be planted; therefore it is usually wise to leave the matter severely alone during the period mentioned, the trees meanwhile being heeled in where the roots will remain plump and moist. With the advent of February better climatic conditions are likely to prevail, and the trees can soon be properly placed in their permanent quarters.



THE RED VALERIAN (CENTRANTHUS RUBER) AS A WALL PLANT. IT IS EXCELLENT FOR GROWING IN THIS WAY.

lodged, and thus the remedy will become as bad as the disease. Properly carried out, this winter washing is most beneficial, but to be fully effectual it should be done by all, and not by the few as at present.

Stakes.—When the weather is dry and frosty during the winter, and it is not possible to push on the pruning or to do any land cultivation, a spare hour should be found to test all the stakes that are supporting the trees planted last autumn. Of course, sound, strong supports would have been utilised at the outset, and probably the ends tarred or soaked in paraffin to preserve them, but some will always go, and the more quickly they can be removed and new ones put in the better. When the old stake is out, the fresh one should be driven down into the original hole so as to avoid injury to the roots, and, immediately it is in position, securely attach the stem to it

Pruning.—As long as the weather remains open, and during intervals between hard spells or wet, the pruning should be advanced with all speed. I would urge the desirability, when once the foundation of the trees has been properly formed, of limiting the use of the knife to the removal of crossing or badly placed branches and the reduction of unripe tips of the growths. This means, of course, that the tree will quickly assume its natural habit, and this is precisely what favours the finest crops. The severely restricted shape that has to be adopted in many gardens is by no means conducive to the finest results, and the operations connected with it take up valuable time which might well be more profitably used in other operations in the garden. Obviously these remarks are not applicable to trained trees, but only to those grown as bushes or as standards in the open quarters.

FRUIT-GROWER

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Strawberries in Pots.—If plants were placed in gentle bottom-heat a month ago, the flower-trusses will now be beginning to push forward. As soon as the flowers begin to show colour, the plants should be removed to a shelf quite close to the glass in a temperature of 50° at night. These plants will require increased supplies of water as the season advances, and the foliage should be syringed once or twice daily, according to the weather; but when the flowers are open, no overhead syringing need be given. Any plants which do not promise well may be discarded at once. Continue to place batches of plants in gentle heat as it becomes necessary to keep up the supply.

Early Permanent Vines.—As soon as the buds are sufficiently advanced, these Vines should be carefully tied to the trellis. The night temperature may then be increased to 65° in mild weather, but on cold nights it is better to allow the temperature to drop slightly than to keep it up by hard forcing. Syringe the walls and vacant parts of the bed as it becomes necessary, in order to maintain a moist atmosphere. Disbudding should be carefully attended to as soon as the growth is sufficiently advanced to enable the operator to distinguish which are the most promising shoots.

Midseason Vineries.—Vines in these ought to be pruned and the houses thoroughly cleansed as soon as possible. In pruning these Vines a great deal depends on the variety and the state of them as to how far each spur should be cut back, but where space exists the best practice is to prune to what may safely be regarded as a fruiting bud. With young, healthy Vines two prominent buds are quite sufficient, as this will give the cultivator a choice of which may be the best-placed shoot of the two when the time arrives for disbudding.

Plants Under Glass.

Cyclamens.—Plants which are showing flower will benefit by frequent applications of weak liquid manure. Keep them exposed to the light and admit air whenever the weather permits. If aphid is present on the plants, the house should be carefully fumigated, or the foliage will soon become deformed. Young seedlings in 2½-inch pots must be kept quite close to the roof glass in a temperature of 50° by night, in order to promote clean, healthy growth. As soon as these plants are large enough, they should be potted into 3-inch pots, which must be quite clean and carefully crocked.

Chinese Primulas.—Plants which are in flower should be given a temperature of 55° with a rather dry atmosphere. These are greatly valued at this season for their bright and varied colours, as well as for their pleasant perfume. Young plants for succession should be kept quite near the glass, and if the pots are well furnished with roots, a sprinkling of artificial manure may be given with advantage.

Poinsettias.—The most forward plants should now be gradually hardened by their removal to a drier atmosphere with a temperature of 60°, in order to prepare them for house and church decoration during the Christmas season. Plants for succession may still be grown in a higher temperature, where some stimulant can be applied several times weekly.

The Flower Garden.

Chrysanthemums.—Plants which are stored in cold frames for the purpose of producing cuttings must be examined frequently, and if slugs are troublesome, a sprinkling of soot or lime should be applied to keep them in check.

Pelargoniums.—If space is available, the most forward of bedding Pelargoniums may be potted at once. Plants in 3-inch pots ought to be put in 5-inch pots and placed in a temperature of 50° quite near the roof glass. Verbenas, Lobelia and various plants need to be kept growing all the winter, and where large quantities of Lobelia are required, propagation should be commenced at once, as several batches of cuttings may be secured from plants propagated now.

All decaying foliage should be removed from bedding plants as soon as possible, or much injury may be caused to the stock.

The Hardy Fruit Garden.

Ground Work.—The past month has been favourable for the lifting, root-pruning and removal of all kinds of fruit trees, and this work should be pushed forward as quickly as possible while the weather is open. In all cases where new plantations are to be made, the ground ought to be trenched to the depth of 2 feet, and if stagnant water is present in the soil, a thorough system of drainage must be provided.

Raspberries.—If new plantations are contemplated, no time should be lost in preparing the ground for the plants. This must be trenched and manured, and the plants may be placed in rows 6 feet apart. Later in the season they should be cut to within a few inches of the ground. Established plants ought to be freely thinned and secured to the wires. Lightly fork the ground and give a surface-dressing of farmyard manure.

The Kitchen Garden.

Turnips which are fully matured should be lifted and placed in a cool position. A shed behind a north wall is a very suitable place for them. A great quantity must not be placed together, as they are liable to decay; protection from frost is all that is necessary. Later batches may be left in the ground for some time yet, and when sharp frost sets in, a covering of some light material should be placed over the roots in the bed, where they may be allowed to remain if not too far advanced.

Potatoes in Store should be carefully examined during wet weather, and as this work proceeds the tubers for planting next season ought to be selected and placed in single layers where light and air can reach them. This is a very important matter, as much depends on the selection and care of seed for next season's crop.

Onions in Store should also be examined and all decaying bulbs removed. Ventilation must be freely given. If laid in single layers, they will keep much better than if large quantities are placed together.

French Beans.—If a sowing of French Beans is made now in 7-inch pots, a supply of tender young pods should be available about the middle of February. A temperature of 60° will be necessary. For this sowing The Belfast is one of the best varieties.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Cauliflowers.—Where opportunity exists for growing an early supply of Cauliflowers, a small sowing should now be made of one or other of the early forcing varieties. The seed may be sown in shallow boxes and placed in gentle heat, and as soon as the young plants appear they must be given a position close to the glass. Guard against damping, and prick out into boxes as soon as the young plants are ready.

Asparagus.—To have a supply of this fine vegetable at the commencement of the New Year, a number of clumps should be lifted and placed in the forcing-pit without delay. Care must be taken, however, that the bottom-heat is not too violent, otherwise failure is sure to result. Cover the crowns with about four inches of fine soil, afterwards giving them a thorough soaking of tepid water.

Horse Radish.—These roots may now be dug up and stored among sand or soil for future use. It will be as well to grade the roots at this time, selecting the best for use, and the next size should be stored separately for planting in the spring.

The Flower Garden.

Lily of the Valley.—Beds that have been undisturbed for a number of years will be showing signs of exhaustion, and the resultant flowers small and weak in consequence. The present is a suitable time to make new plantations. The ground for the new beds should be deeply dug or

trenched, at the same time adding some good manure. In planting, select the best crowns; the smaller ones can be planted by themselves in another part of the garden, where, if liberally treated, they will give a useful supply of flowers later. When planting is completed, the bed should receive a top-dressing of such material as that from a spent Mushroom-bed.

Hyacinthus candicans.—Although bulbs of this are generally regarded as perfectly hardy, still, where the soil is inclined to be cold and wet, it will be advisable to lift and store them in sand or soil, where they will get a more complete rest. As, however, the bulbs will be soft, they should not be out of the ground for any lengthened period. They ought to be replanted not later than the beginning of March.

Bedding Plants.—From now till February all bedding plants will require to be carefully attended to, in order to keep them in a healthy condition during the cold and damp weather. In the case of Geraniums little or no water will be required, but, should it be necessary, they must be given a thorough soaking, which will serve them for weeks. Other bedding plants must be attended to similarly. Where only a few stock plants exist, it may be necessary to put these into heat to produce cuttings.

Plants Under Glass.

Begonias.—Winter-flowering Begonias of the Mrs. Heal and elatior type have been seen in much better condition lately, possibly on account of their requirements becoming better known. In the growing season the presence of the tiresome Begonia mite is a source of great annoyance. But possibly the resting period is the most critical stage to get over. When they pass out of flower they should be given a position on a shelf in a warm house and watered very carefully, reducing the supply as they go to rest. At no time, however, should they be allowed to become dust dry.

Lachenalias.—These useful greenhouse bulbs should now claim attention, although many may have been potted up in the autumn. At the outset they ought to be grown in a cool greenhouse, and, until they have made some growth, little or no water should be given. These bulbs are very useful for making up wire baskets to be suspended from the roof; indeed, it would seem to be the most successful way of treating them.

Freesias.—Although these are not very well adapted for forcing—indeed, too much heat is to be avoided—still, some may be hastened into flower by transferring them to a heated pit. A vase or two of flowers about the beginning of the year will be very much appreciated on account of their delicious fragrance.

The Hardy Fruit Garden.

Pruning Apricots.—The pruning of these must proceed on all favourable occasions, bearing in mind that this work should be completed by the end of January. The fruit is produced on the previous year's growths, so that a sufficient number of these should be retained to furnish the wall. Older trees, however, are usually treated on the spur system, and the aim should be to get the spurs back as close to the wall as possible. Avoid wholesale cutting away of these, which will more than likely result in the tree gumming badly.

Nuts.—Although these do not succeed so well in the Northern Counties as they do in the more congenial climate of the South, it is surprising what a useful crop can be secured with a little attention. Although the pruning should not be done much before March, old trees should have the suckers removed now, as well as a few of the older branches where they appear crowded.

Fruit Under Glass.

Young Vines.—Vines that were raised from eyes put in at the beginning of the year may now be cut back to within two eyes from the base. They may still be allowed to rest for a few weeks, and, should they have been well ripened, there will not be much danger of them bleeding to any extent. Should, however, they continue bleeding, the wound must be dressed with styptic.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

CULTIVATION AND COLLECTION OF MEDICINAL PLANTS IN ENGLAND.

[The following has been recently published as Leaflet No. 288 by the Board of Agriculture.]

OTHER MEDICINAL PLANTS.

(Continued from page 602.)

CONSIDERABLE demand will occur next year, owing to short supply, for Buckbean leaves, Centaury, Coltsfoot leaves, Feverfew, Figwort, Marshmallow leaves and root, Meadowsweet, Wild Carrot fruits and Yarrow. These include some of the commonest British wild plants, but in the ordinary way few are collected in England except by herbalists, or by herb gatherers on behalf of a few agents for wholesale firms.

The herb collector's calling is a poor one at the best of times, but there is now every prospect of a rich harvest for some time to come. His outfit consists of some old sacks and a "paddle"—a strong iron spud 10 inches long with a cross foot-piece and tough 4-foot ash handle. With this a hard day's work may result in a hundredweight of Dandelion roots being taken to a middleman for forwarding to the manufacturer. The latter will require more henchmen next year, the medicinal plants dealt with below being now in greater request than usual, besides Wild Aconite, Belladonna, Henbane and Stramonium. Farmers and landed proprietors might be asked to allow access to their estates to herb gatherer or local botanist.

Barberry (*Berberis vulgaris*, L.): Bark will be wanted next year. Ordinarily it is worth 40s. per cwt. in the dry state. Home supplies will be insufficient.

Bittersweet (*Solanum Dulcamara*, L.) grows wild in moist, shady situations, and is common in hedges and thickets throughout England. There is only a small demand for the drug, which is prepared from the smooth, two or three year old (about a quarter of an inch thick) branches collected in autumn after the fall of the leaves. The branches should be dried and cut into pieces about half an inch long with a chaff-cutter.

Broom (*Cytisus scoparius*, Link.): The brush-like branches contain most alkaloid in winter, but are also gathered in June for expression of juice.

Buckbean (*Menyanthes trifoliata*, L.): Leaves are generally collected in spring. The plant is a marsh herb distributed throughout Britain.

Burdock (*Arctium Lappa*, L.): The root is still used.

Centaury (*Erythraea Centaurium*, Pers.) is common in this country, and the dry herb will be required next year.

Coltsfoot (*Tussilago Farfara*, L.): The leaves retain some reputation as a household remedy. Plenty are to be had for the trouble of collecting, the plant abounding on poor, stiff soils. The leaves are collected in June or July. The flowers, which appear in spring, are also used to a slight extent, as well as the root.

Elder (*Sambucus nigra*, L.): Flowers will be needed more than usual. They are plentiful, but require quick collection and rapid transit if they are to be used fresh for making Elder flower water. They can be preserved for future distillation by mixing them with 10 per cent. of common salt.

Figwort (*Scrophularia nodosa*, L.) occurs in moist situations throughout England.

Hemlock (*Conium maculatum*, L.) is a biennial growing wild on the banks of streams, along edges of fields or in neglected meadows. It is used chiefly for the expression of Conium juice. It is collected in June from second-year plants.

Horehound (*Marrubium vulgare*, L.) grows wild in this country, but is not common. It might pay to cultivate next year, as it is in steady demand.

Male Fern (*Aspidium Filix-Mas*, Sw.) is one of our commonest indigenous Ferns, growing luxuriantly in moist, sheltered situations. Germany (Harz and Thuringia) supplied all the Male Fern rhizome or extract used in this country, and any rhizome collected in this country will meet a ready demand.

Meadow Saffron (*Colchicum autumnale*, L.) is abundant in moist meadows in some parts of England, and will be much wanted. The corms (or underground "bulbs") should be dug up in July after the leaves have faded, but they are found with difficulty, and are hence usually collected later when in flower.

Meadowsweet (*Spiraea Ulmaria*, L.): More than usual of this herb will need to be gathered.

Mullein (*Verbascum Thapsus*, L.): This biennial plant occurs fairly frequently on roadsides and waste places in Britain. There will be a good enquiry for dry leaves.

Red Poppy (*Papaver Rhæas*, L.): The petals find a steady if limited market. Farmers can arrange to deliver fresh petals to manufacturers. Children can gather the petals, placing them in a linen bag suspended round the neck, leaving both hands for work, and with a little education are a positive help in preventing the spread of this corn-field weed.

Rose petals will be much in demand, Continental supplies being cut off. They usually realise 3s. to 4s. per lb. when dry, but will now be more valuable for a time. Any dark red Rose petals are suitable, and some organisation for collection and drying could be arranged in Rose propagating centres.

Sweet Flag (*Acorus Calamus*, L.) can be found in quantity along the edges of streams and lakes. The dried rhizome will be readily saleable.

Yarrow (*Achillea Millefolium*, L.) is one of the commonest British plants, and the dry flowering tops are utilised.

Squirting Cucumber and *Lactuca virosa* are cultivated in a small way, while Bryony root and Buckthorn berries are among the wild products in very limited demand.

NOTE.—In the ordinary way a few pounds of dried herb are only disposed of with difficulty, buyers requiring hundredweights or none. Next year, however, is likely to be the exception, and such quantities as can be obtained will be saleable. In any case it is best to get into touch with a buyer before commencing to grow or collect medicinal herbs. The drug grower who has special facilities for dealing with these should be approached in the first instance.

THE EDITOR'S TABLE.

Interesting Winter Flowers from Taplow.—Messrs. Barr and Sons of King Street, Covent Garden, send from their Taplow nurseries four interesting and beautiful winter flowers. These are *Iris stylosa* (unguicularis) and its white variety, *Galanthus Elwesii* and *Narcissus Bulbocodium monophyllum*. The Irises are very charming and too well known to need comment, the beautiful blue shade of the type appealing to us more than

the white varieties. Elwes' Snowdrop is also fairly well known now, though it might be grown far more extensively in pots than it is at present. The *Narcissus*, which Messrs. Barr send in a 2½-inch pot, is a perfect gem, the large white hoop, or corona, almost obscuring the narrow and inconspicuous perianth segments. We cannot conceive anything more beautiful for tiny pots at this season. Messrs. Barr write: "We have much pleasure in sending you blooms of *Iris unguicularis* and *I. unguicularis alba*, also a pot each of *Galanthus Elwesii* and *Narcissus Bulbocodium monophyllum*, all from our Taplow nurseries. *Iris unguicularis* and its variety, also the *Galanthus*, have come from the open, the former being cut in bud and opening in our shop window. The *Narcissi* have been grown in a cold frame, where they have been merely protected from heavy rains to prevent damage to the blooms. We are sure you will agree that the pretty little white Hoop-Petticoat makes a most charming pot plant. The *Galanthus* and *Narcissi* were potted in September."

A Beautiful *Cratægus* from Maidstone.—Messrs. G. Bunyard and Co., The Royal Nurseries, Maidstone, send a fruiting shoot of the beautiful Thorn named *Cratægus Carrièrei*. In leaf, flower and fruit *Carrière's* Thorn is one of the most attractive members of a large family. It is a hybrid which originated in France, but what are its parents does not seem very clear. M. Carrière, writing in the early eighties, described it as a seedling from *C. mexicana*; the second parent may be the Cockspur Thorn (*C. Crus-galli*), while some authorities are inclined to the belief that the conspicuous spots on the fruit suggest *C. punctata* as one parent. The glistening white flowers are nearly an inch across, with attractive pink stamens, borne in flattish corymbs towards the end of May and during early June. During autumn, with the lovely tints of the foliage and the orange red fruits, the tree is a beautiful study in red and gold. Its most valuable character has yet to be told, for long after the leaves have fallen the clusters of richly coloured fruits hang on the trees into the New Year. For a Thorn the fruits are large, being three-quarters of an inch in diameter, hanging in clusters of five to ten or more fruits. *Cratægus Carrièrei* forms a round-headed tree 18 feet to 20 feet in height.

THE IDEAL CATALOGUE.

SOME SUGGESTIONS FOR NURSERYMEN AND SEEDSMEN.

GARDENING literature is plentiful enough in these days; but of the many shapes it takes I do not know that, for interest, there is anything to beat a good catalogue; a specialised catalogue for choice; best of all, a *Narcissus* catalogue. The advertising columns of *THE GARDEN* make good reading—amusing, instructive and with more human nature in them than many novels. Still, I like a good catalogue even better; of the *Narcissus* for choice, as I have said. But of the *Narcissus*, as of other things, there are catalogues and catalogues. My own *vade mecum* is the list issued each autumn by a much-respected house with which I have dealt ever so long, and to which all lovers of the flower owe a great debt—X. and Sons, the well-known firm of Pimlico (or somewhere). Theirs is indeed

a model catalogue—in short, like Eclipse, it is easily first, with the rest nowhere. Still, catalogues, like all merely human institutions, are none of them perfect, not even my *vade mecum*. It will have to mend in several details—not many, but a few—before it can be called perfect. For one thing, it uses the word “Daffodil” loosely, without the precision to be expected from such an authority, though that defect is not my subject of quarrel with it on this occasion. The matter in respect of which I now venture to question its wisdom is its way of appraising the merits of certain Daffodils and recommending them to clients; for if you accept the judgment of this catalogue as to the merits of certain flowers, you must come to the conclusion that unless a Daffodil is more or less expensive, it cannot be a flower “of the highest quality”; or, putting it another way, that all cheap Daffodils are necessarily second rate. Now, the most perfect flower conceivable, however dear it may be this year as a seedling, must in a few years become cheap; that is, if it is a good “doer,” and if it is not, whatever its other virtues, it comes in, so far, short of the best. A variety offered this year at £20 per bulb may, a few years hence, be offered at twenty pence. When it becomes cheap, therefore, must its merits be revised, and what is now “highest quality” be labelled second or third quality? And is it credible that among the many varieties of the past fifty years, which were once expensive, but have now become cheap, there are so very few first-class flowers? Yet that is, I think, the general inference that must be drawn from the recommendations made by this catalogue to those who come to it for information or advice.

I have made an analysis of certain of its lists and prices. It may not be an absolutely accurate analysis, but it is as accurate as I can make it, and will be found quite sufficiently so for purposes of argument. The catalogue presents two lists. The first is a list of “New Seedling Daffodils,” while the second, and much the larger, is “A General List of Daffodils,” containing the less recent varieties. The “New Seedling Daffodils” have for myself only a slender interest, being as much beyond my means as the same number of hothouse Orchids. Allowing for “errors and omissions,” the number of such seedlings offered is seventy-four, of which forty-eight—that is, about 64 per cent.—are recommended as “of the highest quality.” The prices of these seedlings, of course, vary; but the average price per bulb is £6 2s. The only comment I desire to make upon this list is that the percentage of “highest quality” is very high, and that, if it may be accepted as correct, the evolution of the *Narcissus* is indeed proceeding “by leaps and bounds.”

Those to whom, as to myself, Providence has sent neither poverty nor riches will naturally concern themselves with the “General List of Daffodils,” since it contains varieties more within range of their purses; but they will find little encouragement in its perusal. In this list, which, be it said, contains the choicest survivals of more than fifty years of sedulous cultivation of the Daffodil by careful hybridisers, you will find comparatively few flowers with the enviable *cachet* of four crosses. Of Daffodils proper—that is, flowers of the trumpet, *incomparabilis*, *Barrii* and *Leedsii* sections—there are, in the general list, 287 varieties, of which thirty-four are recommended as “of the highest quality”; that is, about 12 per cent. of the whole as compared with 64 per cent. of first rates among the seedlings. Still, 12 per cent. of a total of nearly 300 varieties offers a consider-

able choice to the buyer of modest income. Yes; but if you tot up the quotations for the thirty-four first-rate varieties, you will find the average price per bulb to be £1 8s. 6d., a price which, I am afraid, many who love the Daffodil will regard as prohibitive. Glory of Leiden, Van Waveren's Giant, Hamlet, Mme. de Graaff, Victoria, J. B. M. Camm, Sir Watkin and Katherine Spurrell are not catalogued as of the highest quality. And this is a curious thing; for on another page in this same catalogue all these and many other varieties which are pronounced second rate are “recommended for exhibition” to “amateurs competing at spring flower shows.” Surely it is treating amateurs a little cavalierly to advise them to compete at spring shows with second best flowers. It would have been more candid, and perhaps more kind, to tell amateurs that unless they can command varieties at an average price of £1 8s. 6d. they had better leave the field to those who can.

One cannot help speculating what number of crosses the catalogues of a few years hence will give to varieties which now cost ten guineas or twenty guineas per bulb, but which may then be had for as many pence. I can remember the time when Minnie Hume was considered first rate; but now that a dozen of her can be had for sixpence, there is “none so poor to do her honour.” I do not say that Minnie Hume is a flower of the highest quality, or one of the second highest; but if this Daffodil had all the perfections of Challenger (a flower which I do not myself know, but of which it is enough to say that it costs £20 per bulb in the open market), which of us would have the moral courage to call a flower first rate that is retailed at two for a penny? The old stagers among us remember quite well the stir Sir Watkin made when it was discovered wasting its beauty in some obscure Welsh garden, and how wistfully those of us with little to earn watched the annual quotation as it descended shilling by shilling to the level of our means. This flower is as big and handsome now as it was then, but it is no longer (says my authority) in the first rank, though it is in the second, which is more, perhaps, than those who love the flower have a right to expect, seeing that it costs only 1½d. per bulb, or, extra strong, 1½d.

But it is time to point the moral, and the moral is this—that it is a mistake on the part of Messrs X. and Sons to docket flowers “first rate” or “second rate.” Why should I be told that certain of the flowers which give me so much pleasure are only poor trash after all? This kind of appraisal, besides being gratuitous and a trifle officious, is useless, and may be misleading, which is worse. For what makes a Daffodil first or second rate? Is it large size, for which I value maximus, or diminutive size, for which I value minimus? Is it solidity of substance, for which I value Victoria, or a certain delicate flimsiness, for which I value *moschatus*? Is it a sharp contrast of crimson and yellow, as in a fine *Barrii*, or a confection in monochrome like *Duchess of Westminster*? A perianth segment shaped like the blade of Barr's bulb trowel, and intersecting the circumference of its neighbours like a figure in Euclid, or a segment starting like the Great Pyramid, from a broad base and tapering to a point? It is none of these, but such a selection and combination of them as will force you to say, when you look at the flower, “I would have that Daffodil just as it is, and not otherwise.” But someone else may say—and possibly, who knows, he may be a judge who officiates at shows—“I cannot agree with you. For my taste, the perianth segment is not sufficiently like the blade of Barr's bulb trowel,

nor has the flower got the red eye, which means so much to me; indeed, now that I come to look at it, it has no eye at all. Shocking! Besides, look at that refractory twist in its segments (which I like flat and overlapping), to say nothing of the defective stalk, which, to my thinking, is one and three-quarter inches too short.” Exactly, most ably reasoned, O learned judge! To me the flower is “of the highest quality,” because I would not have it changed if this could be done to order; to you it is third rate for excellent reasons of your own.

Let us agree, therefore, to give up the absurd custom of deciding for other people what they are to like best, and let us, in our catalogues, if we really wish to be helpful, state the facts, without exaggeration, in a plain matter-of-fact way, with no superfluity of “precious” adjectives, such as “lovely,” “exquisite,” “noble,” &c. These are all very well for ecstatic amateurs like myself; but in a trade catalogue the use of such fine phrases is mere puffery to which no firm should condescend. What we want in a trade catalogue is a bald inventory (the balder the better) of the points of the flower; and the points about which I should myself desire information, if I meditated the purchase of a new bulb, are these: Classification of the variety; colour, texture, shape and size of bloom; proportion of parts (e.g., crown relatively to perianth); stalk; foliage; vigour of constitution; reproductiveness (that is, increase by offsets, receptiveness of stigma and fecundity of pollen); suitability for specific purposes (e.g., pot culture, massing, growing in grass, &c.). This looks a large order, but it is not really so formidable as it looks. When bulb merchants in their catalogues supply these particulars (and perhaps a few more which other buyers may suggest), we shall no longer require to be told whether a variety is “of the highest quality,” and we shall be coming at last within measurable distance of the perfect catalogue, which may I live to see.

SOMERSET.

THE MOUNT ETNA GENISTA.

DURING the scorching hot days of July and August, when many flowering shrubs need a deal of coaxing to keep them alive, the graceful Mount Etna Genista (*G. ætnensis*) gives us showers of its golden blossoms. It is an ideal shrub for hot, sandy soil, where many other kinds will not thrive, but it also seems at home in other and widely diverse situations. Last autumn I noticed some wonderful bushes of it overhanging a placid pool in a Thames Valley garden, and a beautiful picture they made, the reflection of the slender stems and golden blossoms in the water adding not a little to the charm of the surroundings. Although in a young state the shoots are sparsely clothed with soft, silky foliage, in older specimens they are quite devoid of leaves. This, however, is not very noticeable, as the slender, delicate green shoots make excellent substitutes. In common with others of the genera, and also its near ally the *Cytisus*, this Genista is not easily established, and for that reason young plants in pots should, if possible, be purchased. When full grown a good plant may be anything from 12 feet to 18 feet in height, and I know of few shrubs that are more attractive during autumn, and none that is better adapted for growing in hot, dry situations. In addition to the rich golden colour of the small, Pea-shaped flowers, they emit a rather strong yet pleasant fragrance, a feature that should commend the plant to many.

TROJAN.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PHEASANT'S-EYE NARCISSUS (A. B. C., Lancs).—It is not clear from this name to which variety of *Narcissus Poeticus* you refer. The double form is prone to so-called "blindness," and the May-flowering *Poeticus*—that often referred to as "Pheasant's-eye"—is not free flowering under certain conditions of shade or in dry soils. The variety *ornatus* requires good cultivation, though it rarely fails when the bulbs are of the right size. The other "Daffodils" which now flower very badly, and have been in their present situation nine years and are very thick, are obviously overcrowded and require dividing, replanting and fresh soil. You cannot do this now with advantage, and if done would only further weaken the bulbs and delay their ultimate recovery. Such work should be done in July, and as that time is far distant, we suggest you write us in early June next and we will tell you what is best to do. Meanwhile, assist growth by a mulch of manure and by frequent watering with liquid manure in spring. If stable manure is not available, apply Clay's Fertilizer and Wakeley's Hop Manure to the soil.

ROSE GARDEN.

HÆMANTHUS AND ROSE (E. W.).—The *Hæmanthus* bulbs should be potted in a mixture of loam, leaf-mould and sand, and placed in the warmest part of the greenhouse. Until growth commences, only sufficient water should be given to keep the soil slightly moist. You say nothing about the treatment your plants have received; therefore we cannot decide whether yours have been rightly treated or not. If your bulbs were freshly imported from South Africa, we see nothing wrong in their behaving as they have done, for when bulbs are sent from any part of the world where the seasons are the reverse of ours, it takes some time for them to fall into line with those grown in this country. They should flower in the summer, but freshly imported bulbs are as erratic in this respect as in their time of starting into growth. With regard to *Rose Juliet*, it is the reverse of being a poor grower, as its strong, upright shoots are very vigorous. It certainly does not flower with the same freedom as many others do. As the plant is such a strong grower, the planting, or the conditions under which it is placed, must be at fault, providing always that the plant referred to was a good, well-rooted one. Many *Roses* are advertised so cheaply that it is impossible to produce satisfactory ones at the price; hence it is far better to obtain plants from a reliable source, and, above all, plant them with as little delay as possible, providing the ground is in a suitable state; if not, lay the roots in soil at once till the place is prepared for them.

TREES AND SHRUBS.

PRUNING A SUMACH (G. H. N.).—The best time to cut your *Sumach* back is February. It may be pruned

fairly severely, but all wounds should be coated with tar afterwards. The plant will probably produce more young branches than are actually required to form a well-furnished specimen. In that case some should be removed when a few inches long.

THE GREENHOUSE.

FREESIAS FOR INSPECTION (G. B.).—We see little amiss with your *Freesias* except that the edges of one or two leaves have got slightly yellow, due, in all probability, either to a little over-watering or to the exposure of the plants to frost for a time. The curiously swollen roots are quite normal, and are formed by almost all corms for special purposes.

PLANT FOR IDENTIFICATION (A. E. S.).—The name of the plant from which the leaf was taken is *Grevillea robusta*, a native of Australia. From its deeply cut, Fern-like foliage it is much grown for various decorative purposes. It is a very good room plant, but does not possess any special gas-resisting qualities. With the darker nights now upon us, you, of course, burn more gas, and consequently the conditions are not so favourable for plant-life as they were when the days were lighter. The smoke-laden fogs that are so often experienced in the neighbourhood of London cause the leaves of this *Grevillea* to drop in a wholesale manner and leave the plant quite bare. It is quite possible that the young shoots referred to by you as being just pushed out will continue to grow, and in spring the plant will be again furnished with its handsome leaves. In its native country this *Grevillea* forms a large shrub, so that it is not likely to flower in a small state like yours; indeed, it rarely blooms in this country. In the London parks, *Grevillea robusta* may frequently be seen in summer employed as a dot plant in beds of lower-growing subjects. We advise you to keep your plant in as light a position as possible, where it is quite safe from frost. It requires a moderate quantity of water during the winter; that is to say, enough to keep the soil fairly moist, but not saturated.

FRUIT GARDEN.

FRUIT GARDEN (A. B. C., Lancs).—You do not say whether the area is laid out in any form or merely a vacant plot between walls. If the latter, and assuming that the walls are not less than 8 feet high—they would be better at 10 feet or 12 feet—we should advise 8-feet-wide borders adjacent thereto for the accommodation of bush fruits in front of the wall trees. In larger areas bush fruits frequently intersect the rows of pyramid or standard trees, whichever is favoured by the planter, and in this way provide a certain revenue till the others come into bearing. In your small area we think it best to keep them apart and grow Strawberries or Potatoes between the larger trees for the first year or two. You tell us nothing of the purport of the proposed planting, and unless the fruit is intended for home consumption, i.e., private use, we say at once that you are attempting too much in the area named. Moreover, it is important to us to know whether for private or commercial use, because for the former a long season or succession of fruits is of the highest importance, and which is less so when fruits are sent to market. In the absence of such particulars, and because of the variety required, we imagine the fruits are intended for home use, and our reply is based thereon, though you finally enquire whether Damsons would pay to plant. In so small a space we think not. Of dessert Apples, Devonshire Quarrenden, James Grieve, King of Pippins, Cox's Orange Pippin, Braddick's Nonpareil and Lord Burghley; culinary, Frogmore Prolific, Stirling Castle, Lane's Prince Albert, Bismarck, Bramley's Seedling and Newton Wonder. Pyramid trees are recommended: Pears, Doyenné d'Été, Williams' Bon Chrétien, Beurré Superfin, Marie Louise, Doyenné du Comice and Josephine de Malines, all dessert sorts. May be planted as pyramids, or grown as single cordons on walls. Stewing Pears, Catillac, Durondeau, General Todleben and Vicar of Winkfield. Plums, dessert, Coe's Golden Drop, Early Transparent Gage, Jefferson, Kirke's Purple Gage and Reine Claude de Bayay; kitchen Plums, Czar, Dymond, Early Prolific, Grand Duke, Pond's Seedling and Victoria. Grow dessert sorts on south and east walls. Cherries, Belle d'Orléans, Black Eagle, Elton, Early Rivers, Black Tartarian and Kentish Bigarreau. Red Currants, Fay's Prolific and Ruby Castle; Black, Boskoop Giant, Lee's Prolific and Baldwin's; White, White Versailles. Gooseberries, dessert, Langley Gage, Leader, Golden Gem, Red Warrington and Whinham's Industry. Raspberries, Perfection, Superlative, Yellow Superlative and November Abundance. Important cultural items are that the land should be deeply trenched and burnt earth freely, or lime at the rate of two bushels per rod, added. For stone fruits, it should be remembered that lime is essential, and in preparing a 2-feet-wide trench, chalk or lime should be freely incorporated with the staple soil.

SOIL FOR FRUIT TREES (H. C. F.).—If your soil is, as is very probable, deficient in lime, we think it would be a good thing to give it a dressing of powdered chalk at the rate of about three tons to the acre. Potash salts you will find too expensive this season to use, but you may safely use superphosphate if you have added the chalk, and it would probably improve the keeping qualities of the fruit. It should be added that many varieties of Pears are better for being picked a little while before they are actually ripe.

ARRANGEMENT FOR FRUIT TREES IN NEW ORCHARD (Fruit Trees).—The arrangement suggested is so good that we can find no fault with it. We presume the orchard is intended for the home supply of fruit, and not for sale. The distance apart to plant is quite correct. Apple trees do not assume the pyramidal form naturally like the Pear does, and we think you would do better with all bushes and no pyramids. These should be grafted on

the dwarfing English Paradise stock and the standards on the free or Crab stock. Pear trees for espaliers should be worked on the Quince stock. We need scarcely remind you that fruit trees do badly when grass is permitted to grow over their roots, and especially is this the case when the trees are young.

KITCHEN GARDEN.

CARROTS FOR INSPECTION (Weaver).—Your Carrots appear to have been attacked by the Carrot fly grub, and as the parents which lay the eggs fly readily, soil dressings are of little avail against them as a rule. The trouble is lessened by keeping the soil about the roots of the Carrots firm, by destroying the thinnings immediately instead of leaving them on the soil, and by sprinkling sand moistened with paraffin along the rows about the time the thinning is done.

MISCELLANEOUS.

NAME OF FRUIT.—H. Ingram.—Hormead Pearmain.

SOCIETIES.

THE NATIONAL ROSE SOCIETY.

ANNUAL GENERAL MEETING.

The annual general meeting of the National Rose Society was held in the Connaught Rooms, Kingsway, London, W.C., on Thursday, the 10th inst., the president, Mr. C. E. Shea, presiding over a large gathering. The report and financial statement submitted show that, in spite of the war, the society has had a good year and that its finances are sound. There is now about £2,000 in the reserve fund, £500 being added in 1913, leaving a working balance at the end of that year of £474 15s. 11d. For the year ending 1914, after paying all expenses, the society has a balance in hand of £704 18s. 3d., a very satisfactory condition considering everything. Mr. Shea, in proposing the adoption of the report and financial statement, said that there was not the slightest need for them to be depressed. Naturally, they had lost some members, many of whom had stated their intention of rejoining as soon as the war is over, but during the year they had made a net increase in membership of 222, the total number of members now being 6,257. He thought that professional Rose-growers would probably benefit soon by the war, as a great many people were making a lot of money out of various contracts, and they would soon want to plant Roses. Some discussion had arisen in the past concerning the abandonment of the autumn show, but the Council had no option but to take that course. He thought the one sad feature of the report was the paragraph referring to the retirement of Mr. Mawley from the hon. secretaryship, but was glad to know that they would not lose his services entirely as he was to be their president for the next two years.

Mr. G. Paul, V.M.H., in seconding, said that he could heartily endorse Mr. Shea's remarks, especially those referring to Mr. Mawley. As a trade grower he felt very grateful, and he was sure others did also, to the private growers who had supported them during the present crisis by giving orders as liberally as they could.

The Rev. J. H. Pemberton stated that before the report was adopted he would like to point out that the society's publications did not come before the whole of the members of the Council for approval; they were the work of the publications committee. In the recently issued "Hints on Planting Roses" there were several things that he wished to dissociate himself with, especially the statements relating to the Roses raised by M. Pernet-Ducher. He would also like to see the last part of the paragraph in the report relating to the provincial show deleted, and moved that this be done. This was unanimously carried.

The proposed alteration of rules, as sent out to members, was the next business. Mr. E. J. Holland proposed that the first five paragraphs of suggested alterations as circulated be adopted, this being seconded by Mr. Cecil Cant. This raised a protest from a member, whose name we were unable to ascertain; but the protest, which took considerable time on the part of its mover to put before the meeting, was not very clear. Mr. Holland's motion was carried. The remaining paragraphs of alterations were proposed by Dr. Williams, and duly seconded and carried. Dr. Williams also moved the alteration of by-law No. 1. The deletion suggested, he pointed out, would enable the Council to have a free hand in fixing the date of the metropolitan exhibition. Mr. Dennison spoke against this, but after some discussion the proposal was carried. A vote of thanks to the officers and Council for 1914 was proposed by the Rev. H. S. Arkwright, and seconded by Mr. F. W. Harvey.

The next item on the agenda was the special vote of thanks to Mr. Mawley for his services as hon. secretary. In moving this the president referred in glowing terms to his services to the society, these remarks being seconded by the hon. treasurer, Mr. G. W. Cook, and endorsed by Mr. George Paul, V.M.H. On page 605 we give Mr. Mawley's portrait, and also some details of his work in connection with the society. This special vote of thanks was carried unanimously and with acclamation.

The result of the ballot was next announced, all the names sent out to members standing with the exception of Mr. T. G. W. Henslow and Mr. H. J. Spooner, the former being a newly nominated member for the Council, and the latter an old member of the Council. The president now is Mr. E. Mawley, V.M.H.; deputy-president, Mr. E. J. Holland; and the hon. secretaries, Mr. H. R. Darlington and Mr. Courtney Page. New members of

the Council are the Rev. H. S. Arkwright, Messrs. A. R. Bide, W. J. Grant, F. W. Harvey, B. Peyman and A. E. Prothero.

The induction of Mr. Mawley as the new president was the occasion of a remarkable scene, unparalleled, we think, in the annals of the society, the whole of the members rising and cheering enthusiastically, finally joining in singing heartily "For he's a jolly good fellow." Mr. Mawley suitably replied, and then stated that his first duty as president was the very pleasant one of handing to Mr. Shea the Dean Hole Memorial Medal as some slight recognition of his services in the interests of the society. A portrait of Mr. Shea will be found on page 603.

The conversazione held at the conclusion of the annual meeting was well attended, and was the most comfortable and successful of its kind the society has ever arranged. The artists were excellent, and the tables beautifully decorated with Roses by Mr. R. F. Felton. The society's lantern slides of Roses, prepared and shown by Mr. Wettern and explained by Mr. E. J. Holland, were very fine indeed, and the coloured scenes transported the audience to the gardens of July, so realistically were the Roses depicted.

EAST ANGLIAN HORTICULTURAL CLUB.

THE annual meeting was held on Wednesday, December 9, at Norwich, Mr. John Clayton presiding. The report, presented by Mr. W. L. Wallis, secretary, stated at the outset that some twenty members had enrolled themselves in His Majesty's Forces, and that £4 had been subscribed to the National Relief Fund. The membership numbers 365. The financial position is sound, there being a balance in hand of £127 7s. 8d. The educational work of the club, carried out by means of exhibitions, papers, lectures and debates, has been most successful during the year. Mr. J. D. Cockerell, gardener to Mr. G. E. White, Eaton, was the champion exhibitor of the year. It was incidentally mentioned that Mr. Cockerell is now in Kitchener's Army. Mr. W. Shoesmith becomes the possessor of the Harmer Silver Challenge Cup, having won it three years. Thanks are accorded to the donors of special prizes and to those who had made special exhibition displays during the year, special mention being accorded to Messrs. Daniels Brothers, Limited; Hobbies, Limited; and Mr. Frank Neave. The outing to Kew Gardens in the summer and a presentation of a silver flower vase to Mr. Herbert Perry are alluded to. In conclusion, the report thanks Mr. John H. Willis for his interesting monthly weather reports, the local and gardening Press for their reports of meetings, and the office-bearers for their services. The election of officers followed, at the outset of which Mr. H. Perry moved that the club should suspend the rule calling upon the president and vice-president to be changed, urging that it would be wise to retain the services of Mr. John Clayton and Mr. T. Notley in these respective positions. This suggestion was unanimously agreed to. All the other officers were re-elected, a special tribute being paid to the energetic secretary, Mr. W. L. Wallis, for his untiring devotion to his office in spite of the fact that his health has not been at its best. Mr. George Henley, Earlham Hall Gardens, Norwich, was added to the committee. The exhibition tables presented a bright appearance, Begonias and Primulas predominating in the flower section. Apples were good, especially the dishes of Cox's Orange Pippin. Mr. W. Shoesmith staged some extra good Grapes, both black and white.

HIGHCLIFFE GARDENERS' ASSOCIATION.

ON December 7 there was a good attendance of members when Mr. C. J. Gleed, Staff Teacher, Hampshire County Council, gave an interesting and valuable lecture on "Insect Pests." The lecturer dealt with green and black aphides first, as they were such common pests and caused so much trouble. The most effectual way to get rid of them was to smother them wholesale, and to this end, he said, fumigation, vaporising and syringing with soft soap and quassia, and also with a paraffin emulsion, should be carried out. A good emulsion could be made that would keep well for a year in bottles. Twelve ounces of soft soap should be placed in a gallon of water, adding one gallon of paraffin; this mixture should be gently boiled and well churned up to bring it to a thick creamy emulsion; afterwards it should be once more gently boiled, when it would be in a fit state to store. Use one part of the emulsion to twenty parts of clear water on ordinary plants, and one part to twenty-five parts on tender foliage when syringing. This emulsion was also recommended for killing caterpillars on Currant bushes. Lead arsenate was advised as a cure for the ravages of the Codlin moth if the solution was sprayed on directly the flowers had fallen, as then the grubs were poisoned as soon as hatched. Mr. Gleed recommended soil fumigants in the case of wireworm-infested land. The more porous the land was, the better the result of the fumigants. All click beetles found in rubbish should be destroyed, as well as traps set for catching the wireworms in the soil. Leather-jackets, grubs of the daddy-long-legs, could be got rid of, to a great extent, by surface stirring of the soil, as then the birds would find and eat them. Sodium cyanide was advised for killing mealy bug, white fly and red spider in glass structures, but owing to the great danger attendant on its use, Mr. Gleed said much care should be exercised in using it and in the opening of doors and ventilators from the outside for some time before anyone was allowed to enter the house. He also dealt with the mites on Black Currants and with the uses of sulphur as a remedy for red spider and other mites. A discussion followed, and the lecturer replied clearly to many questions put to him.

TWICKENHAM HORTICULTURAL AND MUTUAL IMPROVEMENT ASSOCIATION.

AT the last monthly meeting of this society, Mr. W. E. Reeves in the chair, Mr. E. Montague, The Gardens,

Grey Court, Ham, gave a very instructive lecture entitled "Hints to Allotment Holders on the Cultivation of Vegetables." The lecturer has practical qualifications for dealing with the cultivation of vegetables. For two years in succession he has won the valuable challenge cup for the best collection of vegetables offered by this society, always against strong competition. The lecturer in his opening remarks pointed out the necessity of deep cultivation if first-class vegetables are desired. Another important point often overlooked was the selection of good tools to do the work properly, which helped to do the work much more expeditiously than was the case with indifferent tools. The lecturer then gave a list of vegetables most suitable for cottage garden and allotment holders, dealing with each variety separately, and gave some useful hints on sowing the seed, thinning, rotation of crops, the use of various manures, and the treatment of the various insect and fungoid pests, which altogether proved a very interesting and instructive lecture, not only to allotment holders, but to professional gardeners present. Mr. Montague brought an excellent collection of vegetables worthy of a place on any exhibition table. These, by kind permission of his employer, Colonel Biddulph, were given to St. John's Hospital, Twickenham. A very hearty vote of thanks was accorded Mr. Montague for his very able lecture.

DUMFRIES AND GALLOWAY GARDENERS' ASSOCIATION.

AT the fortnightly meeting of this association, held in the Wesley Hall, Dumfries, on the evening of December 5, the subject was "Flowering Trees." Mr. S. Arnott, chairman, presided over a good attendance, who listened to the lecture—which was given by Mr. D. Hunter of Messrs. Barr and Hunter, Dumfries—with close attention. Mr. Hunter gave an admirable lecture, referring to the importance of the flowering tree in the garden and grounds, and to its comparative neglect in small gardens. He gave an excellent survey of the leading flowering trees, pointing out the best genera, with their species and varieties, and giving valuable details regarding their merits and peculiarities. In the course of the discussion which followed, the thanks of the members to Mr. Hunter were expressed. The chairman, Mr. W. Hutchinson, Mr. J. Henderson, Mr. C. G. Murray, Mr. J. Jeffrey and others took part in the discussion, and Mr. Hunter replied to the points raised in a succinct manner.

WARGRAVE AND DISTRICT GARDENERS' ASSOCIATION.

THERE was a very good gathering of members on December 2, when the hon. secretary, Mr. H. Coleby, gave his second lecture on "Soils." He first briefly recalled the chief points of the lecture given last session, and then dealt with the mechanical analysis of the soil, showing how to test it for humus, carbonate of lime, sand and clay, and the method of working out the percentage of each. The experiments were watched with great attention, and many questions respecting the procedure were asked after the lecture. A good discussion was also maintained and much other useful information brought out, and a hearty vote of thanks was carried with acclamation to the lecturer at the close. Mr. T. Tunbridge of The Three Elms Gardens, Remenham, exhibited a good lot of single Chrysanthemums and was awarded a cultural certificate by the judges. Three new members were elected.

Improvements at Duthie Park, Aberdeen.—

The newly appointed superintendent, Mr. W. B. Clark, is effecting a number of improvements in this important park. Chief among these are internal alterations to the Palm House, where many of the plants are already showing signs of the improved conditions under which they are growing. Outdoors, also, considerable alterations are in progress, and next summer it is hoped that these will be highly appreciated by the public.

Vegetables and Fruit for the Navy.—At a meeting of the committee of the Dumfries and District Horticultural Society, held in Dumfries on December 5, Mr. S. Arnott in the chair, it was resolved to support the scheme for the provision of fresh vegetables, &c., for the Navy, embodied in a letter received from Lord Charles Beresford in connection with the Vegetable Products Committee. The proposal was heartily and unanimously supported, and a committee was appointed to organise the movement in the district and to appeal for supplies.

Balloch Park, Loch Lomond.—The Glasgow Town Council, at a meeting on December 8, approved of the proposal in their draft provisional order to purchase an estate on the shores of Loch Lomond, near Balloch, as a public park. The cost of £30,000 is to be paid from the Common Good, and the park will be maintained from the

public rates of the city. Although the property of the city of Glasgow, and secured through the patriotic action of the Council, the new park will be truly a national one, securing for the public access to one of the most beautiful of Scottish lakes.

Henry J. Clayton Memorial.—In March last, following upon the deeply lamented death of Mr. Henry J. Clayton, who was for so many years gardener at Grimston Park, Yorks, you were so kind as to permit me the hospitality of your columns to formulate a proposal that his many friends in the horticultural world should unite in raising a memorial to his memory in connection with the Royal Gardeners' Orphan Fund, of which he was one of the original promoters and subsequently one of its most strenuous supporters. I now beg you to kindly allow me to state that as a result of that appeal I have had the pleasure of handing over to the treasurer of the Fund the sum of £50, together with a list of the contributors, who I am sure will be gratified to know that a permanent memorial to Mr. Clayton's worth as a gardener and as a friend, and of his good work in connection with the Fund, is thus assured for all time. I would wish also to be permitted to express my hearty thanks to all who have thus helped to perpetuate the memory of our old friend in the way that I know would be most dear to his heart.—T. TURTON, *The Castle Gardens, Sherborne, Dorset.*

TRADE NOTE.

BOILERS FOR GREENHOUSES.

NOW that the cold, damp weather is with us, it is necessary to keep a steady, warm temperature in our greenhouses. To do this it is necessary that the boiler should be thoroughly reliable and economical, otherwise all our labour in other directions is lost. Those who need new boilers for greenhouse or conservatory should write for the excellent catalogue just issued by Messrs. Pearce and Co., 644, Holloway Road, London, N. This catalogue is well compiled and fully illustrated, and in its pages amateurs will find a good deal of very interesting information. Messrs. Pearce will be pleased to send a copy post free to any of our readers who care to write for it. In spite of the war, they inform us that they have made no advance in the usual prices charged for their boilers.

CATALOGUES RECEIVED.

H. J. Jones' Nurseries, Limited, Ryecroft, Hither Green Lewisham: New Chrysanthemums.
Seadons, Limited, St. Albans: Sweet Peas.
Messrs. W. Drummond and Sons, Limited, 57 and 58, Dawson Street, Dublin: Fruit Trees, Shrubs, Roses, &c.
Mr. T. H. Dipnall, near Hadleigh, Suffolk: Sweet Peas.
Messrs. Little and Ballantyne, Carlisle: Trees and Shrubs.
Messrs. William Watson and Sons, Limited, Clontarf Nurseries, Dublin: Fruit Trees, Roses and Shrubs.

SITUATIONS WANTED.

Our charge for advertisements under the above heading is 1/6 for 26 words, and 6d. per line after, consisting of eight words to the line. Press day Friday.

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THE GARDEN.

No. 2249.—Vol. LXXVIII.

DECEMBER 26, 1914.

NOTES OF THE WEEK.

To Our Readers.—By the time this issue is in the hands of our readers, Christmas will be very near and a memorable year swiftly drawing to its close. Our outdoor gardens, though hushed and still, are not devoid of interest, as we have tried to point out on another page, even though the earth be scarred by wintry blasts and bare of the glories of summer. With nearly the whole of Europe in arms, the stereotyped Christmas greetings this year possess less meaning than ever. Our thoughts naturally turn to Belgium, a country that possesses peculiar interest for horticulturists in the United Kingdom. So surely as our gardens, now in their winter bareness and swept by cruel winds and frosts, will awaken to a greater glory, so shall the fair land of Belgium rise from its tribulation greater, nobler and more beautiful. When the time for restitution comes, horticulturists will not be slow to render to our distressed Allies the material assistance that will be so urgently required. To our readers the world over, and especially to those who from time to time send us letters of appreciation, we tender our thanks for support so loyally given.

General Index to this Volume.

The present issue completes Vol. LXXVIII., and we are therefore presenting a general index, together with a title-page and frontispiece, suitable for binding the whole of the issue published during 1914. Next week we shall publish our Special New Year Number, which will contain numerous articles by the best recognised authorities in this country. Of more than ordinary interest will be the first of a series of articles by Sir Herbert Maxwell, Bart., on "Hardy Lilies." As there is always a large demand for the New Year issue, we advise our readers to place their orders well in advance.

Mr. Vernon T. Hill joins the Army.—The many friends of Mr. Vernon T. Hill of the Mendip Nurseries, Bristol, will be interested to learn that he has received a commission as captain in the 12th King's Royal Rifles. Mr. Hill is well known among Sweet Pea enthusiasts, having been a hard-working member of the committee of the National Sweet Pea Society for some years. He also invented the "V.T.H." Slug Trap, which has proved such a boon to gardeners.

A Useful Berried Shrub.—At this season any berry-bearing plant is very useful for decorations, either in the garden or the house. One of the most useful for this purpose is the common Butcher's Broom (*Ruscus aculeatus*), as its large red berries are very conspicuous and are excellent for decorations, particularly when berried Holly is not very plentiful. It will thrive in almost any position, and is excellent for planting under trees. Being dioecious, it is essential that one or two male plants should be mixed with the berry-bearing ones.

The Winter Jasmine.—During the summer months, when our gardens are filled with the flowers of many other beautiful shrubs, the yellow

tion, and at others of as many weeks. Recently we have had enquiries from numerous readers for information about protecting Roses from such frost. With established bushes an ordinary winter does little or any harm, but those newly planted are liable to suffer badly. We know of no better method of protecting them than heaping stale coal ashes, or, failing these, porous or sandy soil, well up between the growths. This prevents the lower buds, on which we must rely for growth next year, being damaged, and is far better than straw, manure, or other litter. With standards, some sprays of Yew or other evergreen tied among the branches usually afford sufficient protection, and straw is quite permissible, as it does not remain sodden for any dangerous length of time.



POLEMONIUM RICHARDSONII ALBA, A CHARMING PLANT FOR THE ROCK GARDEN.

Polemonium richardsonii

alba.—Botanically, *Polemonium richardsonii* is referred to *P. humile*, though the plants that are met with in cultivation under these names are distinct enough for all garden purposes. For example, we have never seen *P. richardsonii* so consistently dwarf growing as *P. humile*, or the latter so consistently tall growing as the former. *P. richardsonii* is usually 1½ feet high, a third of this being the average height of the other plant named. In this connection it is interesting to note that "Don" in his "Dictionary of Gardening," while making no allusion to *P. humile*, refers to *P. richardsonii* as a 6-inch-high plant. Hence, probably, there is either confusion among the species or, what is equally likely, a few genera-

tions of seedling-raising have quite outstripped the original in vigour and in other ways. That named above, the subject of the illustration on this page, has pure white flowers, the typical kind having pale blue flowers with yellowish tube. Pleasing in flower and ornamental in the pinnate character of their leaves, they are worthy subjects for the rock garden or front places in the select herbaceous border. Seeds are produced with some freedom, and if sown as soon as ripe, the seedlings soon make nice flowering tufts. The plants also lend themselves to increase by division of the tufts, an operation best performed with the return of growth in early spring.

Protecting Newly Planted Roses.—Usually when Christmas is over we get a spell of severe frost, sometimes of only two or three days' dura-

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Banksian Roses.—We have a Yellow Banksian Rose on the east side of this house that has hitherto flowered well every year; it is only pruned regularly.—G. MOON, *Penyvoel House, Llanymynech, S.O., Montgomeryshire.*

Cistus ladaniferus.—I am sending you a photograph of *Cistus ladaniferus*, to show what this plant can do in difficult situations. The plant, one of a hedge, was three years old at the time the photograph was taken in 1913, and has now grown nearly twice the size. It is planted in heavy,

and I mention it in the hope that some disappointed gardener may find *Gentiana verna* less difficult to grow in future.—MARY GRIFFITHS, *Oakfield, Charlton Kings, Gloucestershire.*

Weeds as Foliage.—"Anne," said my maiden aunt, severely, as she seated herself at breakfast, "I believe you like weeds." Outwardly bold but inwardly quaking, I replied, "I do like some." "Humph! I thought you must. I've just walked round your garden, and it's full of them." Now, this was exaggeration and a gross libel on my old gardener (nicknamed *Too-Tidy*). But I have observed that folks who go walking before breakfast are often somewhat self-righteous and censorious at that meal. Now I will explain, for the benefit of other poor amateurs who, like

ground and cover over the crowns with a few inches of soil or ashes. When winters are mild they push their growth through the soil or ashes, and are cut back again when frost is severe; but we find they are not at all injured even if cut back several times during the winter and early spring. The principal varieties grown at Burford are *C. Powellii*, *C. Powellii alba* and *C. Moorei* (or *makoyanum*), but *C. Powellii alba* is the finest of them.—WILLIAM BAIN, *Burford Gardens, Dorking.*

—"Enquirer's" difficulties, referred to on page 594 of your issue of December 12, in reconciling the various catalogue instructions for planting *Crinum Powellii*, probably arise from the tapering character of the bulb, which in developed plants measures from 1½ feet to 2½ feet from base to tip. With an 18-inch bulb two of the apparently antagonistic instructions become identical, as to plant "12 inches deep" is to leave "one-third of the bulb above the surface." The point in deep planting is winter protection, but it is, of course, equally necessary that the ground should have been well worked, manured and drained for a further 2 feet. We have just dug up an old-established clump from the north side of a low greenhouse wall, which has always flowered well with the roots 1 foot beneath the surface, and proved hardy, although a south exposure is much preferable. The recent editions of "The English Flower Garden" no longer repeat the instructions quoted by "Enquirer," but are content with the remark that "the bulbs should be so deeply planted as to show only the upper part of the neck."—R. WALLACE AND CO.

—In response to "Enquirer's" request, my bulbs were planted 6 inches to 8 inches deep. They have been for twenty years or more in the same spot, and produce annually a good display. *Crinum Powellii alba* has not been planted nearly as long. It was planted in the same manner, and its blooms are as abundant as beautiful. Certainly "doctors differ and patients—or plants—die," but, if surface planting be attempted, winter protection is all the more necessary. Even with deep planting mine are given a coating of dead Beech leaves round their stems, then some coarse cinders, and over all some prunings of evergreen shrubs. The necks of the bulbs, often nearly a foot long, require this protection so as not to weaken the bulbs. I do not believe any *Crinum* has a complete rest; only a much retarded or arrested growth in British gardens.—J. HILL POE, D.L. (Captain).

Araucaria imbricata as Firewood.—I notice, in reply to "Mrs. F. E. R.," on page 592, issue December 5, you do not recommend the timber of *Araucaria imbricata* for firewood. For my part I cannot understand why anyone grows the Monkey Puzzle except in parks or park-like grounds. One sees this tree planted bountifully in villa gardens, and I never behold one but I think that it has been placed there by a speculative builder, or by one who has no knowledge of gardening or lacks good taste. It is a tree which exhausts the soil it grows in as much as anything I am cognisant of, and after having prospered at the expense of any neighbours, rain seldom penetrates its branches when the tree is some twenty-five years old. At best it is an ugly thing, especially after it loses its lower boughs, as it generally does at an early date if planted near a town. It is also a danger to those who unluckily come into contact with it. While the boughs are highly inflammable,



A PLANT OF *CISTUS LADANIFERUS* IN A READER'S GARDEN. THIS IS A CHARMING HARDY SHRUB.

stony, clay soil, with no manure or lighter soil added, and the only protection we give is in the hardest part of the winter, when a wind-screen is placed on the north side. This is a very exposed position here. I may add that all the *Cistus*es do well here in the same soil, and I think it a great pity they are not more largely grown, as the length of time they flower compares very favourably with other shrubs.—B. LEACH, *Boidier, Headley, Epsom.* [The *Cistus*es also thrive in poor, sandy soil.—ED.]

How to Grow *Gentiana verna*.—In connection with the Royal Horticultural Society's Show at Chelsea in 1913, I saw a suggestion that *Gentiana verna* should be grown in turf. As I had lost plants for some years, I jumped at the idea and ordered a new stock. Having by me dried specimens from Switzerland fully 4 inches high, I thought I might venture to put the small Irish form in a rough turf edging, where the rock garden slopes down to the bog garden. The grass was left quite wild, and I now find that the *Gentians* are dead or dying. (Possibly fine turf would have suited them better.) At the same time I put similar plants close by in the rock garden with *Thymus Serpyllum* in the place of grass. This has proved a great success,

myself, have no heated greenhouse, why I like "some" weeds. I should often be "hard up" for that variety in foliage which gives so much grace to cut flowers if I did not have recourse to "weeds." One of the most delightful is Milk Spurge. A china bowl filled with this is charming with most flowers. Then there is the Filmy Ferny foliage of Fool's Parsley. Young leaves of this or of Hemlock are admirable with the pink double Anemones which come to us from France. At the present time of year whole plants of Chickweed and Speedwell bodily uprooted make a pleasant change from moss as a carpet for flowers. The reddish, frost-nipped tips of Dead Nettle are lasting and effective. The wiry sprays of the little Nippewort (*Lapsana communis*) are as good as, or better than, *Gypsophila* for the foundation of a bouquet in trumpet vases. These are "some" of the weeds I allow in the far corners of my cottage garden.—ANNI AMATEUR.

How to Plant *Crinum Powellii*.—In answer to "Enquirer," page 594 of THE GARDEN for December 12, as to how *Crinums* are grown at Burford, I may say they are planted from 2 feet to 3 feet deep in the ground. After they are cut down by the first frost, we cut the tops quite level with the

the stem is useless for firewood, as I found some three years since, when I had two trees some thirty feet high cut down. I thought then, as perhaps some of your readers have done, that it would be of service in the form of logs, but I was never more disappointed. Although I tried some pieces of the tree in my house a year or so after it was cut down, I could not burn it. It smouldered in a very hot fire, but it would not burn and give out heat.—OBSERVER.

Ivy Under Large Trees.—I was much interested in the splendid illustration, showing Ivy under a large tree, in your issue of December 12, page 599. Under many large trees, especially those of Firs, Cedars and conifers generally, it is often found to be a difficult matter to get a nice green carpet of grasses; then a substitute must be found. In one case I had to form a border to a drive under large trees, with a fine undergrowth of evergreen and deciduous shrubs, and the most successful plant was the Ivy. Between stone kerbs a nice band of Ivy, 1 foot wide, was planted, and the shoots also pegged down in good loam in which some old mortar rubble was incorporated. A little trimming was all that was required afterwards. I have used Periwinkle plants with equal success under single specimens of large trees, as shown in the illustration referred to, and their lovely blue flowers added much to their attractive appearance.—G. GARNER.

— On page 599 is a picture of a large tree with an under-planting of Ivy. It is a beautiful tree with a beautiful trunk, and you know that, if you could see them, its buttress roots would be beautiful too. Over these roots some heathen has put a blanket of Ivy, and to call attention to its hideousness he has made the blanket the same shape as the last bed he planted with Geraniums and Lobelias, and has clipped it neatly round the edges with a pair of shears. I know my GARDEN, and I turned with pleasure to the article, certain that I should read a poetical and fervid description of the beauty of the buttress roots of a great tree, their mossy coverings and the bare brown earth between them; of how, if the soil be kindly, Cyclamens flourish there, and how, further out, under the branches, Daffodils riot in the spring. To my incredulous astonishment I found that the picture was not intended as an awful warning, but as a pattern immediately to be copied "in a good many private gardens and public parks." I think the picture can be trusted to prevent anybody doing so.—E. T. ENGLAND, *Exeter School, Exeter*. [We publish the foregoing, as it is our policy to give both sides of any debatable question. While agreeing with our correspondent that the buttress roots of a tree are beautiful, and that various bulbous plants thrive under the branches of some trees, there are certain positions, more especially in public gardens and parks, where either bare earth or such bulbous plants are impracticable. In such places Ivy is quite a good covering, as anyone may see in the famous Gardens at Kew, where several trees are under-planted in this way.—ED.]

THE OUTDOOR GARDEN AT CHRISTMAS.

TO the uninitiated and unobservant, there are few more dreary or uninteresting places at the festive season than the outdoor garden; but for those who have eyes to see and sufficient knowledge of plant and animal life to appreciate Nature in all her captious moods, the outdoor garden is interesting at all seasons. It is true that those plants which gladdened our hearts during the variable days of spring, the heyday of summer, or later on in the waning months of the year, have descended to a well-earned repose, and it is equally true that the damp, dull days which are so plentiful at this season do not tempt us abroad so alluringly as do the halcyon days of May or June. But if we forsake our gardens, as I fear too many do, with the waning of October, we lose more pleasure than many would believe.

Apart from the plants that may be legitimately expected to give us flowers outdoors at Christmas,

and which will certainly continue until then, unless severe and sudden frost puts a check on their levity. These are, however, but the pleasant surprise-packets of the outdoor garden at Christmas, and although they may, with doubtless many others, be found in several gardens this year, it is not always that we can enjoy them at so late a date. Of those plants which we may expect, even in severe winters, to find flowering now, there is a goodly host. It is true that their beauty is not of the garish kind that we associate with plants of the more favourable seasons, but that it is a beauty quite in keeping with the dull mood of Dame Nature herself, none, I think, will deny. Who, for instance, can fail to appreciate the graceful, pale green catkins that the male plant of *Garrya elliptica* is carrying just now? Yet were we to see this shrub bedecked with catkins in the more bounteous and sunny days, we should probably pass it by as a thing of but little account. Our appreciation of flowers is, after all, one of proportion and environment. Give us plenty under pleasant conditions, and we love only the best; give us a few under a sombre sky and



CATKINS OF THE MALE PLANT OF *GARRYA ELLIPTICA*. THIS IS A BEAUTIFUL SHRUB AT CHRISTMAS.

there is always the possibility, particularly in a mild and open season such as the present, that stray blossoms of many kinds can be culled for the house. Wallflowers of the Early Paris type, Monthly and other China Roses, St. Brigid Anemones, Polyanthus in many hues, double Daisies, the large Snowdrop known as *Galanthus Elwesii*, which this year is flowering quite out of season, and, most appreciated of all, some delightfully sweet Mignonette, are a few of these out-of-season flowers that the writer has in blossom in quite an open garden some days before Christmas,

amid dismal surroundings, and we love them all. It is, perhaps, well that it should be so. Winter Jasmine and Winter Sweet, *Laurustinus* and *Virginian Witch Hazel*, *Lonicera Standishii*, a Honeysuckle with fragrant, twin flowers of dirty white hue; the Glastonbury Thorn and Gorse are all large shrubs or trees that give us their flowers at this season; yet were they to flower at any other time of the year, the majority would be regarded as of little account.

Of more lowly stature are the Crocuses *Imperati* and *lavigatus*; *Iris reticulata*, *I. stylosa*, *I. alata*,



YUCCAS AND OTHER FOLIAGE PLANTS IN MIDWINTER.

Christmas Roses, Winter Aconites (the first of which are just opening); Cyclamen Coum, the dainty little *Scilla sibirica*, and the rosy-looking, bud-bedecked plants of *Ericas carnea* and *mediterranea hybrida*, to say nothing of some late flowers of that low-growing and little-known shrub *Polygala Chamæbuxus*.

But flowers are not the only interesting things in the outdoor garden at Christmas. The many fruits that have this year been produced in such bounteous array do much to dispel gloom and to gladden the heart of the enthusiast. For does not each little crimson or yellow berry contain wonderful possibilities? Take the crimson haw on the Thorn tree, or the more brilliant and rounded berry on the Holly. Each, providing Nature is kind to it, is capable of forming a tree equal in every way to its parent. Their present beauty is a mere detail in their mission in life, a mission that, alas! the majority are, for some inexplicable reason, never allowed to fulfil. Yet the possibility is there, and the knowledge of that fact cannot but lend additional interest to our berried plants as we see them in the outdoor garden at Christmas. Cotoneasters, such as *frigida*, *Simonsii* and *rotundifolia*; the Sea Buckthorn, with its pale orange, semi-transparent berries; the Snowberry, with glistening white fruits; wild and other Rose hews to which the weather has been kind; the pearl-like fruits of Mistletoe, and the pink ones of the lovely Prickly Heath, are but a few of the many that add their quota of brightness, beauty and interest to the outdoor garden just now.

Even though we had no flowers and no berries in our gardens at Christmas, there would still be plenty to interest those who can appreciate beauty of a more humble kind. What, for instance, can be more effective than bold groups of yellow or red stemmed Willows and Dogwoods, planted by the water-side for preference, or in some prominent place in the landscape? In the summer and autumn days, when their leaves are present

and the colour is forming, we give them scant attention; but now that the surroundings are dull we appreciate the bright patches of colour that they create. Then there are the white-stemmed Brambles, curious, lank-looking objects that appear to have been whitewashed and which must be seen by moonlight to be fully appreciated.

Several of the hardy Bamboos, particularly *Bambusa Métake*, are also interesting, their delicate green foliage and glistening stems making a pleasing feature in the outdoor garden. Yuccas, with their bold, fleshy leaves, the Golden Euonymuses and Yews, the glaucous tints of Cedars and Pines, Lavender, Pinks and Cotton Lavender, and the beautiful green of the Mossy Saxifrages, are all objects of quiet beauty that, under more favourable circumstances, would pass unnoticed. The silver stems of Birches, the gnarled trunks of old Oak and other trees, and the graceful outlines of those of weeping habit are all fully revealed to us now that Nature has stripped them of their summer garb.

All the foregoing are but external features, perhaps the only ones that really matter to many who appreciate their gardens solely for the flowers, fruits and stems that flourish therein. But for the enthusiastic cultivator there is still further interest and pleasure in literally getting to the root of things. Surely the originator of that hackneyed phrase, "get to the root of the matter," must have been a gardener of the first water. For getting at the roots of our plants there is no time like a spell of mild weather in winter. But what a shock, albeit an interesting one, awaits us when we do get there! Can it be possible that those ugly, gnarled roots are at one and the same time the feet and mouths of those dainty flowers that charmed us so fully in the sunny days of spring or summer? If Nature were, as some would have us believe, always harmonious, we should expect something quite different, something more in keeping with the delicate beauty

of stems, leaves and flowers that we see above ground. But Nature is, first and foremost, severely practical, though she may try to hoodwink us with beautiful and sweetly scented flowers, which are, after all, but a phase in her ordering of things, and not, as we would fain imagine, solely for our delectation. If, in walking round the outdoor garden at Christmas, we bear in mind that the apparent bareness is but a passing event, and look for and appreciate those things of beauty which are still there, we shall have gained some knowledge and pleasure that the cheeriest of firesides could not yield.

F. W. H.

THE CHRISTMAS & LENTEN ROSES.

THESE bold flowers, popularly known as Christmas and Lenten Roses, from their resemblance to a single Rose and time of flowering, are of singular beauty and a great asset to the border and shrubbery, giving bright relief to the dulness of the garden

during the winter months. They thrive in most garden soils with very little attention, and prefer to be left undisturbed. When it is necessary to transplant them, the best time for doing the work is in spring. [? Ed.] A dressing of well-rotted manure will be found very beneficial and should be applied in March; though we are advised not to use manure in the short treatise on *Helleborus niger* in the *Botanical Magazine*, where there is also a very good plate of this variety (Plate 8). *Helleborus niger*, the Christmas Rose, is an interesting plant, and was much esteemed in the past on account of the medicinal properties it contains; and although it has now been deleted from the British Pharmacopœia, it is still used to a slight extent in homeopathy. Legend says that it was with this plant that Melampus, the Greek seer, healed the three beautiful daughters of King Proetus, who had been stricken with madness by the goddess Hera for their haughtiness in not joining in the worship of that almighty spouse of Zeus. We should like to believe that *H. niger* was a reliable specific for madness, but Gerard's description of its "vertues" hardly invites us to put it to the test. He says: "Black Hellebore purgeth downwards flegme, choler and also Black Choler especially and all melancholike humors, yet not without trouble and difficultie. Therefore it is not to be given but to robustious and strong bodies as Mesues teacheth. A purgation of Black Hellebore is good for mad and furious men, for Lepers, for them that are sick of quartaine ague and briefly for all those that are troubled with black choler and molested with melancholie."

It is probable that the Greeks made large use of this plant because it luxuriates in the woods and hills of Greece. *H. niger* is an alpine plant, and grows on the Apennines, in Italy, Greece and Southern Europe generally. It seems likely that this plant was introduced into this country from Holland and brought with it the name of

"Christ's Rose," as it was called in high Dutch "Christwurz," that is, Christ's Wort or Herb; and in low Dutch "Heylich Kerft Cruit," because it flowered at the time of the birth of Our Lord Jesus Christ. All authorities seem to agree that it was introduced into this country in 1596, though no name of the introducer can be traced, and it is possible that this date is incorrect and may have been copied by one and another, for Gerard, in his "Herbal" (1597), speaks of this variety as though not uncommon round London. It therefore seems likely that it may have been introduced before 1596, as the compiling and printing of Gerard's book must have occupied some years. *H. niger* is so called from the fact that its roots are blackish.

The chief other varieties of *Helleborus* are *abchasicus*, green or purplish; *atrorubens*, dark red; *caucasicus*, pale green, and a variety of this known as *punctatus* (dotted), which is very fine; *colchicus*, bright purple, and *c. coccineus*, bright scarlet; *foetidus*, green; *lividus*, pale green; *odorus*, green and sweet-scented; *olympicus*, purplish; *viridis*, bright green; and *venosus*, purple, veined.

Helleborus orientalis, the Lenten Rose, has large rosy flowers, often four or five on a stem. Many very fine hybrids have been raised from this species.

Clumps of *H. niger* or the *orientalis* varieties will force well, but must only be placed in gentle heat—a cold frame will be sufficient; and it is quite worth the little extra trouble involved, for the blooms will come out beautifully clean, instead of being splashed with mud and battered by the rough weather. They will also be slightly longer in the stem, which is an advantage. G. N. BUNYARD.

THE VALUE OF TRENCHING SOIL.

THE trenching of all vacant plots should proceed as fast as possible during dry weather. Where the soil is heavy and retentive of moisture, it is not wise to tread upon it, even for the purpose of trenching, when in a wet condition unless boards are used to stand upon. Treading kneads the surface too much, thus preventing the proper amelioration of the soil by weather influences. I am a strong advocate of trenching ground annually, or certainly in alternate years. The soil then resists drought so much better during the summer and is so much more easily manipulated and improved generally. The expense of trenching stiff soil too often prevents it being done, but it pays to do it thoroughly. Soil of a light loamy or sandy character does not need trenching; deep digging, with abundant supplies of manure, are all that is necessary to obtain satisfactory results from such soil.

Next to clay, the most difficult soil to manage is that which is heavy, yet not actual clay, some 15 inches or so in depth, overlying a hard, pan-like subsoil of clay and stones firmly embedded. In its natural condition the water from excessive rains cannot percolate through this subsoil for some time, and thus the surface soil remains

waterlogged too long—a condition quite unsuited to plant-life. Such soil can only be treated properly and advantageously by trenching some 2 feet or, better still, 3 feet deep. The method of trenching such soil is open to various opinions. Some writers advocate bringing the lower stratum or subsoil to the surface. To bring such soil to the surface and to leave it there without any addition would entail many difficulties in sowing seeds and planting various crops the first season. If, however, sufficient material, such as decayed vegetable and roadside refuse, leaves, old potting soil, sand and wood ashes, with a small quantity of dry, unslaked lime, can be had to cover the plot 6 inches or so thick previous to sowing or planting the first crop, then I advise the adoption of such a method as bringing to the surface the bottom spit of soil, especially if the plot can be retrenched again the next season. By this method the top and bottom soil will become thoroughly incorporated and improved.

If, however, there is no possibility of obtaining such material, I do not advise bringing the subsoil to the surface. The alternative method is to trench the same depth, but to leave the bottom spit of soil in its present position. When trenching soil of a heavy character, a helpful addition would be a plentiful supply of long strawy manure, freshly gathered leaves or partly decayed vegetable matter. Material of this kind in the bottom trench facilitates quick drainage, and in the near future, when decayed and incorporated with the soil by secondary trenching, provides valuable plant food, apart from its value in ameliorating the soil. I need hardly say that the bottom of the trench should be thoroughly broken up to assist rapid drainage. As trenching proceeds, the soil should be laid up as lightly as possible, especially on the surface, with a view to exposing as large an area as possible to the influence of the weather.

Swanmore.

E. MOLYNEUX.

ROSE-GROWING IN TOWN GARDENS.

THERE is some diversity of opinion as to whether the manuring of Rose-beds in autumn and winter is beneficial or the reverse. The case against it is chiefly that if applied at this time of the year, some of the manurial elements will have become washed out and lost before the roots are able to take advantage of them in the spring, and also that the manure becomes sodden and is likely to prove harmful to the roots and stems of plants during a frost. The latter consideration need hardly deter one, for although it is obvious that plants would suffer from having the substance in actual contact with the stems, those who apply it carefully will see that this does not occur. As regards the roots, a mulch, even of the wettest kind, affords some protection in cold weather, and frost will not penetrate so far into the earth beneath as it would if this were uncovered.

The chief factor which should be taken into consideration is the character of the soil, for no opportunity should be lost of improving its texture. If this be of a light character, therefore, one may safely give a heavy dressing of cow-manure now, but before doing this the soil should be raked up a little around each plant so as to cover about two inches of the basal growths, and this is advisable whether manuring or not.

The manure should be heaped rather than spread between the rows, keeping it well away from the plants. One great advantage of this winter application is that the manure will have become deodorised by the spring, and it will then have rotted sufficiently to be broken up with the hoe. There is no occasion to treat heavy soils in this way, but all will benefit from a dressing of bone-meal and sulphate of potash (three parts



A WINTER SCENE IN THE BAMBOO GARDEN AT KEW

of the former to one of the latter). Bone-meal is a fertiliser that is slow in action, requiring some time to become available as a food supply, while the potash will remain in the soil until taken up by the roots, so that there is considerable benefit in applying both early.

When burning the garden rubbish from time to time, one should bear in mind that the ashes form a valuable manure. Wood-ashes can be added to light soils at the rate of half a pound to the square yard, and if a sufficient quantity is available, sulphate of potash will not be required. Light soils will also benefit considerably by an application of pulverised chalk, which can be applied now, and subsequently hoed in early in spring. This is the most advantageous way of adding lime, in which such land is generally deficient, as it also helps to retain moisture. A pound to the square yard should be the quantity given.

Before planting new Roses or replanting old ones, the roots ought to be carefully examined, and thick ones that are without fibre should be shortened, at the same time removing all those that are dead or damaged. When doing this, one can keep a look-out for suckers and cut out all eyes that are forming upon the stock, which will save considerable trouble later.

P. L. GODDARD.

ROSES ON OLD FRUIT TREES.

It frequently happens that one has an old fruit tree that is past its best, and yet one does not wish to root it out entirely. Few conceive what labour is needed to properly grub out such a plant, and it might often be put to great use and beauty by the help of a few judiciously selected climbers. Among these I know of none better than Clematises and Roses.

At the outset we have ideal ground for the plants to occupy in the most artistic manner. The support, too, is far sounder than we could possibly secure artificially without much expense and labour. Now, far too many err in planting without sufficient preparation in these cases. Remember, the established tree has possession, and whatever else is placed at its base is very heavily handicapped. Therefore we need to take away some of the soil to a good depth and replace it with really good compost, more especially as the older soil must be exhausted. Nor is it quite enough to do this; it is better to sink a small barrel or tub, minus the bottom, and fill this in with some of the better compost. It only remains for me to name a few of the Roses most suitable, and any reader can get to work. *Félicité Perpétue* and *Paul's Single White* are two good whites; *Hiawatha*, *Dorothy Perkins* and *Reine Olga de Wurtemberg*, reds; *Robert Craig*, *Gardenia* and *Alberic Barbier*, yellows; *Elise Robichon*, *Euphrosyne* and *Blush Rambler*, pinks. A. P.

GOLDEN-LEAVED CONIFERS FOR WINTER EFFECTS.

THE various golden-leaved conifers are useful subjects for decorative gardening and may be used for a variety of purposes. Unfortunately, some of the more delicate-constituted ones cannot be grown with success in the

vicinity of large towns and cities, where the atmosphere is rendered impure through smoke or chemical fumes, and even those which grow moderately well under these conditions are shorn of much of their beauty by the coating of dirt

into notice. Some of the best are *aurea variegata*, *Barronii*, *adpressa aurea*, *elegantissima*, *Dovastonii*, *aureo-variegata*, *fastigiata aurea* and *f. Standishii*. The variety *Barronii* is specially worthy of notice on account of the rich coppery colour of the leaves, while *elegantissima* and *Dovastonii aurea* are remarkably graceful in appearance; *adpressa aurea* is of very neat habit with tiny leaves, while the *fastigiata* varieties are golden forms of the Irish Yew.

Next in importance to the Yews are the varieties of *Cupressus*. Of *C. lawsoniana* the variety *lutea* has golden foliage and is of similar habit to the type; *gracilis aurea* is remarkable for its graceful appearance, the secondary branches being pendulous. A golden variety is known of *C. nootkatensis*, while of *Cupressus* (or *Retinospora*) *obtusa* there are several varieties. *Crippsii*, a form of the last named, is a particularly rich-coloured variety of *aurea*, while *gracilis aurea* is of very dainty appearance. *C. pisifera* provides us with several good golden varieties, *plumosa aurea* and *filifera aurea* being the best. *C. macrocarpa lutea* is a vigorous-growing variety of the Monterey Cypress, remarkable for its rich colour during summer and autumn, and its change to a greener tint during late winter and spring. It is an excellent subject, especially for gardens in the vicinity of the coast. The common American *Arbor-vitæ* (*Thuya occidentalis*) provides several golden varieties, that called *lutea* being the best. Of *Thuya plicata* there is a variety *aurea*, and another, *zebrina*; the latter has green and golden-marked shoots. The Chinese *Arbor-vitæ* (*Thuya orientalis*) provides a golden variety named *aurea*, which is a neat-growing plant. *Juniperus chinensis aurea* is a pretty golden variety of the Chinese Juniper, while among Pines we get a golden variety of the common Scots Pine (*Pinus sylvestris*).

In addition to these there are numerous varieties with more or less variegated foliage, but they are inferior to those here mentioned for general work. Some of them have a diseased appearance and the golden patches die



ROSE PAUL'S SINGLE WHITE GROWING OVER AN OLD FRUIT TREE. THE LATTER FORMS AN EXCELLENT SUPPORT.

which collects on the leaves during winter. Under better conditions, however, in a purer atmosphere and away from smoke, where the branches and leaves keep clean, they are most effective, and the colour keeps good for the greater part of the year.

Perhaps of the golden-leaved conifers the various Yews, varieties of *Taxus baccata*, are the most useful, for they thrive in most gardens even about towns. The leaves keep a good colour for many months, and only become dull for a short period previous to new ones being formed. As a rule the brightest colour is found on the under sides of the leaves, but, as they usually turn upwards, the colour is brought prominently

out. Those to which prominence has been given are, in almost all cases, strictly golden coloured, and the plants present a perfectly healthy appearance, being, except in colour, exact counterparts of their respective types, as easy to cultivate, and growing at about the same rate.

Of course, it is desirable and necessary that the soil should be thoroughly prepared before planting, and, if at all poor, some well-decayed manure should be added to the bottom spit. For most evergreens, and this applies equally to those with golden foliage, early autumn—i.e. about the middle or end of September—or the end of March and during April are the best times for planting.

PERPETUAL-FLOWERING PINK PROGRESS.

INTRODUCED in 1909, this beautiful variety has not yet enjoyed the popularity which it deserves, and the only reason I can think of is that it is not sufficiently well known, as any friends who have seen it growing in my greenhouse have been charmed with it, and many indeed are the cuttings which I have given away. Its growth is much more similar to that of a Carnation than of a Pink, but the foliage, being thin and wiry, but exceptionally strong and healthy, closely resembles that of the common Pink. The bloom is most exquisitely formed, and is of a rosy mauve colour. It is, however, a colour which does not blend at all well with most others, but a vase by itself is a sight not to be forgotten. The calyx is not quite what it might be, and I have had some trouble with this splitting, but any defects are amply recompensed by the glorious perfume which, in my opinion, is the feature of Progress. It has the real Clove scent of the old common Pink, and a bunch of cut blooms fills the whole room with a sweet, refreshing odour which few, if any, flowers can excel. Having a hardy constitution, it can be successfully flowered outside or under glass, and in the latter case makes an ideal pot plant. In common with all other Pinks, either cuttings or layers root easily, and as a lot of "grass" is produced, a large stock is very quickly got together. It is not at all difficult to grow well, and I have found the following method of treatment very successful. In August I plant the cuttings in a cold frame in very sandy soil, and when well rooted they are potted into 3-inch pots and replaced in the frame, where they remain all the winter. For the first potting a light compost consisting of two parts light loam, one part leaf-mould and a good sprinkling of coarse sand is best. They will require very little water during the winter months, and are much safer if kept on the dry side. In early spring repot into 5-inch pots, using a heavier compost than for the first potting. Two parts good fibrous loam, one part well-rotted manure, half a part good leaf-mould and a little bone-meal and old mortar-rubble make an ideal medium for this potting. After repotting, the young plants may be left for a few weeks in the cold frame, and then transferred to their growing quarters in the greenhouse, which should be light and airy. If green fly attacks the shoots, irrigate with some good compound whenever the first fly is detected. When the flowers are over, remove as much as possible of the old spent soil and repot into 6-inch or 7-inch pots, using the same compost as before. They will soon start again into growth, and the following season make grand specimen plants either for conservatory decoration or for giving quantities of cut bloom for the house. To enable these two year old plants to yield large blooms, it is advisable to give copious supplies of very weak liquid manure when the flower-buds appear.

Shure.

G. B.

THE ORIGIN AND MEANING OF CHURCH DECORA- TIONS AT CHRISTMAS.

THINK there is very little doubt that one of our oldest and most general customs is that of decorating our churches with evergreens, berries and flowers at the season of Christmas. Pre-reformation or post-reformation, evangelical times or catholic revival, town or country, made only a difference in degree. Wordsworth, John Gay and Robert Herrick, to mention three poets of different ages whose knowledge of country ways and doings is proverbial; Samuel Pepys and John Evelyn, the diarists of Cromwellian and Stewartian times; the fifteenth century congregation of St. Mary-at-Hill in the City of London (as we know from their own or from other written

Our own feelings are sufficient to account for the origin of the practice. There is a seemliness in making the external correspond to the inward on occasions of joy and grief. There is something in the fitness of things that connects decorations and best clothes with days of peculiar importance or the entertaining of guests. It is this, for example, which must have suggested the parable of "The Wedding Garment" to Our Lord, and which must have made its meaning so clear to His hearers. Hence we can see why Christmas has always been associated in the minds of Christians with outward signs of joy both in their homes and in their churches. Impossible but that it should be so. Why, though, Holly and Ivy? What gives these two plants their peculiar position, more especially the first? Two explanations are offered: First, it may be a relic of the old heathen festival of the Saturnalia, which happened to be celebrated at Rome about



A FINE SPECIMEN OF WEEPING HOLLY.

contemporary evidence); all saw their churches decorated for the birthday of Our Lord, and although it is only a surmise, it is well within the bounds of probability if I suggest that the Venerable Bede, Bishop Swithun, Alban the Martyr, or Becket, the murdered archbishop, must also have seen the same emblems of joy and love when they entered God's House on a Christmas morning. Undoubtedly Holly and Ivy are the two plants which always have been, and which still are, associated more than any others with the Nativity. Although the orderly sequence of appropriate and distinctive decorations for the changing seasons has long been a dead letter, we would feel there was something missing were we to see none of the familiar leaves and trails somewhere in the wreaths or devices of to-day

"The Holly hitherto did sway;

Let Box now domineere.

Until the dancing Easter-Day

Or Easter's eve appeare."

From Herrick's "Ceremonies for Candlemass Eve"

a week before the Christian Feast of the Nativity. At this time friends gave one another branches of Holly as an expression of their goodwill, along with the presents which it was customary to send. What more natural than to transfer this innocent custom, with its ready-made meaning, to the great festival of the anniversary of Him who came to bring peace on earth and goodwill among men? Or, secondly, its use may have arisen from the practice of the Druids, who invariably hung in and around their dwelling-places bunches of Holly or other evergreens, in order that the spirits of the woods might find a shelter when their customary abodes were leafless and when the weather was particularly severe, as it so often must have been about the time of the old Christmas Day.

In judging which of the above suggestions is the more probable, it is well to bear in mind two facts: One, the universal association of Ivy with Holly as appropriate for Yuletide decorations,

Church accounts for 1486 (St. Mary-at-Hill, London) are extant which include "Holme and Ivy at Christmas eve," and for 1524 (St. Martin Outwich, London), which have "Item: for holy and ivy at Chrystmas." This may possibly be a relic of the Saturnalian times at Rome, when there is very little doubt men were apt to drink "not wisely, but too well," and when it is certain Ivy wreaths, with their supposed power of lessening the intoxicating effects of wine, were in much vogue. The other is the strange fact that the only plant which, as far as I know, is now absolutely taboo in church decorations is the Mistletoe, the sacred plant of the Druids, cut with imposing ceremonies and with golden knives, and of wide renown for its powers of healing. I am, however, a little doubtful if this has invariably been so, for John Gay (early eighteenth century), who was intimately acquainted with rural life, distinctly says in one of his poems that this was so used; thus:

"Christmas, the joyous period of the year,
Now with bright Holly, all the temples strow,
And with Lawrell green, and sacred mistleto."

If Mistletoe was ever admitted as equally suitable with Holly and Ivy as part of the Christmas adornment of our churches, then probably the Druid origin is the true one. If, on the other hand, it was not so, then the Saturnalian is the most likely one, more particularly when the association of Ivy with Holly is so universal. Personally, I favour the Roman origin as being on the whole the more probable.

A word in conclusion about the factors in the Christmas decorations. Nowadays we use everything that comes to our hands. Yew, Box, Laurel, Cupressus and Thuya are more often, I expect, seen than not. But it was not always so. In the days of Herrick the poet (time of Charles I.) there was a certain well-defined sequence of plants which were to be used for the different seasons, and there is no reason to suppose that the rota was not strictly adhered to. He thus writes of house decoration:

"Down with the rosemary and bayes,
Down with the mistleto,
Instead of holly, now upraise,
The greener box, for show.

* * * * *

Then youthful box, which now hath grace
Your houses to renew
Grown old, surrender must his place
Unto the crisped yew.

When yew is out, then Birch comes in,
And many flowers beside,
Both of a fresh and fragrant kine,
To honour Whitsontide."

—From "*Ceremonies for Candlemasse Eve.*"

In another poem on the same subject the poet seems to allude to the old idea of the evergreens being originally put up as shelters for spirits:

"Down with the rosemary, and so
Down with the baies and misletoe;
Down with the holly, ivie, all
Where with ye drest the Christmas hall;
That so the superstitious find
No one least branch there left behind;
For look, how many leaves there be
Neglected there, maids, trust to me,
So many goblins you shall see."

—From "*Ceremony upon Candlemas Eve.*"

From this last quotation it seems possible to suggest a third idea as to the origin of this Christmas custom of decorating churches and houses. With regard to the former, it may be that the Holly and Ivy are direct descendants of Saturnalian times, and came to Britain ready-made, as it were, with Christianity; while, with regard to the latter, the decorations may be but the continuation of what was once universal throughout the land in the days of the Druids. This, at any rate, would account for the use of Mistletoe in houses, while it is never found in churches. Gay's assertion, though, wants explanation.

JOSEPH JACOB.

FRUIT TREES FOR VARIOUS SOILS AND SITUATIONS.

DURING the next six or eight weeks many thousands of young fruit trees will be planted in various parts of the country, some of them with due regard to the general character of the soil and the positions they are to fill, but many without a thought being given to these important and far-reaching details. With the enlightenment that science combined with practice has, during recent years, brought about, the days of haphazard planting ought before this to have gone. Wise and up-to-date market growers give as much attention to the selection of trees for the soil and positions they are to occupy as they do to the actual planting; but many amateurs and not a few gardeners fail to realise that an unwise selection may prove a stumbling-block for many years, if, indeed, it is ever overcome.

By the selection of trees I do not mean the mere selection of varieties of, say, Apples, Pears or Plums. The best sorts are now fairly well known, and although some do better in certain localities than they do in others, the majority can be grown in almost any district that is at all suitable for the cultivation of hardy fruits, providing the right type of tree, grafted or budded on the stock best suited to the soil, is selected. At the outset, before even the character of the soil is studied, the would-be grower must decide what kind of plantation is to be made—whether it is to be one of trees that will take some time to reach a fruitful stage, but when that stage is reached remain in vigorous and cropping condition for a great many years; or whether the trees shall commence to give heavy crops as soon as established, continue to do so for a score or more of years, and then gradually deteriorate; or it may be that a combination of both is desired. Then, again, the positions of more or less isolated trees must be considered. Is a large tree desirable in a certain spot, or is there only room for a dwarf one, or possibly one that has been more or less severely trained into a certain shape?

These points decided, we may safely turn to the character of the soil and ascertain whether it is composed of a preponderance of clay, or whether sand or similar material forms the bulk. With this information fully ascertained, due regard being given to all the points raised, the selection of trees suitable for almost any garden or plantation will not be a difficult task. Nurserymen of to-day are fully alive to the fact that trees of widely different types are required for various purposes, and lay

themselves out to provide any conceivable types that may be asked for.

Assuming, then, that a permanent plantation or orchard of fruit trees is desired, one where the trees will come slowly into the fruiting stage, but last in that condition for a very long period, we must of necessity have soil with a preponderance of clay and of a good depth, then choose half-standard or standard Apples that have been grafted or budded on Crab Apple or seedling Apple stocks or roots, and Pears that have seedling Pear as a stock. On the other hand, should we desire a plantation that is to crop early, and to last only a comparatively short period, Apples grafted or budded on one of the dwarfing Paradise stocks, and Pears on the Quince, ought to be chosen. Both are shallow rooting and have a dwarfing effect on the trees, besides inducing them to crop freely at a very early age. Although these dwarfing stocks are usually recommended for shallow soil overlying gravel or chalk, and where they do give good results, they may also be utilised on soil of a more retentive and deeper character where dwarf, early cropping trees are desired. An orchard to contain a combination of young fruiting and permanent trees should have half on the stocks previously named and half on the dwarf stocks.

For gardens, pyramid or bush trees, or the trained cordons or espaliers, should be on these dwarfing stocks, as the trees are so much more easily kept within reasonable bounds than if grafted on stocks of a more vigorous character. It is in gardens that special care must be taken in the selection of suitable trees. Nothing is more disappointing than to find that a tree, by the time it is cropping freely, is occupying too much space; the necessary cutting back will only tend to make matters worse. Then, again, some Pears, notably Beurré Bosc and Brown Beurré, usually give the best results if double grafted, *i.e.*, a more common variety, such as Conseiller de la Cour, is first grafted or budded on a seedling Pear or Quince stock, then, when this has grown sufficiently, it is cut down and one of the choicer varieties named grafted or budded on it. Naturally, this is more expensive than where only a single grafting or budding is necessary; but some of the best nurserymen adopt this method, and it pays to select trees of these varieties that have been treated in this way, even though they cost rather more at the outset.

The cultivation of large fruits such as Apples, Pears, Plums and Cherries as cordons is now well understood in every garden worthy of the name. The system has much to commend it. Not only can a large number be accommodated in a very little space, but they are easily managed and protected, and give good crops of the best quality fruit. During recent years the cultivation of Gooseberries and Red and White Currants as cordons has been more widely adopted, and certainly, in the case of the former fruit, the system is much to be preferred to the old style of bushes, wherein the fruit was difficult of access and frequently became splashed badly by heavy rains. For gardens of limited dimensions, cordon or espalier trees of nearly all kinds are exceedingly valuable, and should certainly be chosen in preference to standards or half-standards grafted or budded on stocks of vigorous habit. The Red and White Currants, and also Gooseberries, are excellent for planting against walls or fences facing north. In positions of this kind the fruit can be kept in good condition until late in the season.

TROJAN.

HISTORICAL NOTES ON THE CARNATION.

ONE of the remarkable things connected with the Carnation as a British flower is its comparative novelty. The name cannot be traced beyond, or, to be correct, not quite till after, the middle of the sixteenth century, when it occurs in a letter printed by Hakluyt, also in the "Arte of Gardening" and in "The Gardeners' Labyrinth," and a little later in Lyte's "Herbal" and Tusser's "Five Hundredth Points." No doubt Carnations of a kind would be known and grown previously under the name of Gilliflowers; but even these must have been rare, for, setting aside the assumption that "Gilofre," which disports itself in a variety of spellings in various ancient poetical pieces, has any connection whatever with the Carnation, being invariably associated with exotic Spices, and clearly the Clove of commerce, masquerading in an Anglified French guise, none of the glosses and vocabularies extending from the tenth to the fifteenth centuries, nor any of the few lists of garden plants which have come down to us of date earlier than the sixteenth century, makes mention of the plant.

This does not prove that the plant was not grown, but is probably due to the fact that plants destitute of economic value, either physically or for other purposes, possessed no interest in the eyes of the utilitarians who compiled these particular manuscripts. Carnation seems to have been confined to London, or at least to the South for a long time, because we find Gilly Flower and July Flower in use, the one in Yorkshire in 1618 descriptive of a number of kinds, and the former in Aberdeen in 1624, when Spalding mentions the plants blooming till very late in that year as something unusual. Parkinson, who retains the name of Gilliflower for a section of Carnations, assures the gentlewomen for whom he wrote that the Old English Carnation was a large double flower of a flesh colour. And we may safely conclude from the character of Parkinson for correctness that the variety he refers to was the prototype of all Carnations. He is borne out by Gerard in the name being a distinctive colour one, and it is also clear that "Carnation" did not to these people convey the idea of a blush skin tint such as it has to-day, but the colour of raw flesh. Hence when we come across the names Carnation - Gilliflower and Carnation - Holyoke, we are sure they mean varieties with red or deep rose flowers.

It was not only for the colour that the word was applied, but Carnation denoted a new type

of bloom, very double and much larger than the Gilliflowers, which were either single or double, with small flowers. Liebauld notes two types of double, one large and one small, in cultivation in the South of France in the mid-sixteenth century, and probably our large Carnation emanated thence. Clusius found yellow and apricot Carnations at Vienna; Poland is mentioned by Gerard as the country whence yellow Carnations were derived, and Italy was at the same period noted for its Carnations. It would be strange indeed in that period of merchant

were freely spurred by the fruit-bearing laterals, and these, scarlet in colour, are distinctly ornamental at this time. The fruits are enclosed in a more or less adhesive calyx, and this, bursting open later and reflexing after the manner of Euonymus, reveals the brilliantly coloured fruits. The species is well adapted for pergolas and such-like places.

Chrysanthemum Richmond.—A "Japanese" variety of American origin, its raiser being Mr. E. G. Hill of Rose and Carnation fame. The colour is rich yellow, the variety of much merit at this late season. Exhibited by Mr. T. Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addlestone, Surrey.

Euphorbia (Poinsettia) pulcherrima rosea.—The name is suggestive of a charming and useful addition to a small set long held in esteem for its high decorative merit at this season. The crowning glory of the typical kind is the head of brilliant scarlet bracts (leaves), which not infrequently have a diameter of a foot or more. In the new-comer the bracts are rose-coloured, tipped with green as shown, the examples not having reached high perfection. A good novelty and an acquisition. From Messrs. H. B. May and Sons, Edmonton.

Lælio-Cattleya Sir Douglas Haig (Lælio-Cattleya Henry Greenwood × Cattleya Octave Doin).—A handsome and beautiful hybrid, the pure white sepals and petals in fine contrast with a lip whose frontal lobe is wholly coloured ruby crimson of a rich, intense shade, the remainder white with yellow suffusion. The line of demarcation between these colours is fixed by a deliberate line right across the lip in a way we do not remember to have seen before. From Messrs. Sander and Sons, St. Albans.

CULTURAL COMMENDATION.

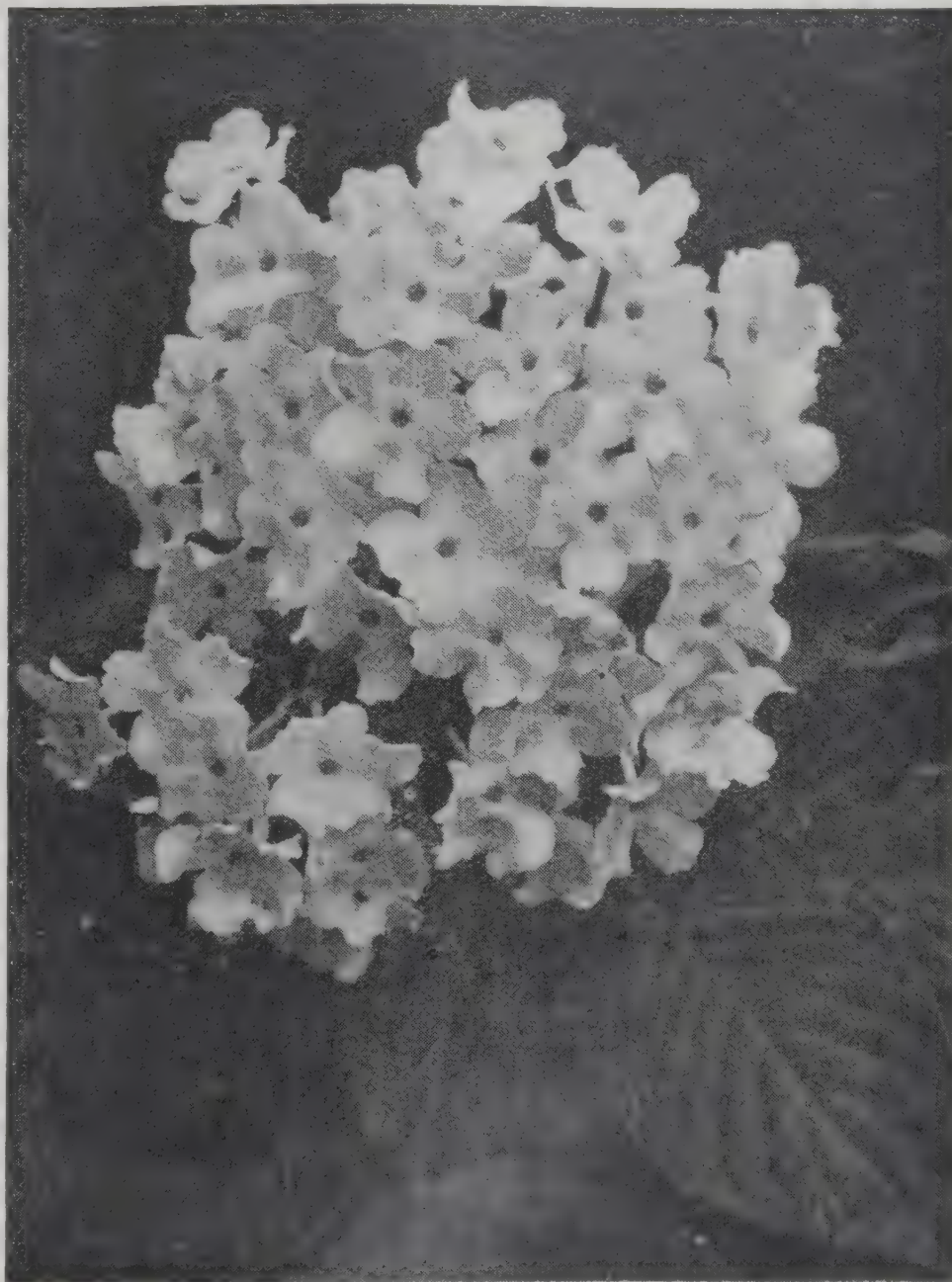
Luculia gratissima.—Superbly flowered branches of this delightfully fragrant, rarely seen greenhouse shrub were shown by Mr. H. J. Elwes, Colesborne, Cirencester, the cymes or heads of blossoms equal in size to those of a large Hydrangea. Larger individually than is usually seen, the flowers were also of a richer tone of

rose colour than is possible of attainment in the London district at this season of the year. The perfect condition of the foliage also demonstrated ideal surroundings as well as cultural excellence. The species is from the Temperate Himalaya. Its presence at exhibitions or in gardens was far more frequent a quarter of a century ago than is the case to-day.

NEW FRUIT.

Apple Winter Ribston.—In general appearance this may be likened to a small Blenheim Orange, and, having the brisk flavour of Ribston Pippin, possesses an assured value at this season of the year. Exhibited by Messrs. George Bunyard and Co., Limited, Maidstone. Award of merit.

The whole of the foregoing awards were made by the Royal Horticultural Society on the 15th inst.



ONE OF THE SPRAYS OF LUCULIA GRATISSIMA SHOWN BY MR. ELWES IN LONDON ON THE 15TH INST.

adventurers were none of these strange and lovely flowers brought home. As we know, they were.

R. P. BROTHERSTON.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Celastrus articulatus.—Fruiting branches of this hardy, deciduous, highly ornamental Japanese climber were shown, and attracted considerable attention by reason of a berry-bearing beauty which it retains for many weeks at this season of the year. The species is now a great attraction at Kew, whence the examples came. The exhibited branches, of the size of an ordinary Cedar-wood pencil and tapering to a fine point,

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Fruit Under Glass.

Early Peaches and Nectarines.—Very careful attention will be necessary now in regard to trees which are in bloom, as during dull weather any extra excitement would be injurious. A night temperature of 55° will suit them well, and while the weather is favourable the top ventilators may be left slightly open. When the flowers are fully open, some means should be adopted to distribute the pollen, either by shaking the trees or by means of a soft brush, which must be very carefully applied. A bunch of soft, dry feathers will answer the purpose well.

Late Peach Trees.—These should be pruned, washed and tied into position with as little delay as possible, allowing a space of at least 4 inches between the young shoots, and a clear outlet for the terminal bud to make headway without crossing other shoots. Examine the borders, and if they are at all dry, give a good soaking of clear, soft water. If the roots are near the surface, a top-dressing of loam and bone-meal may be applied with advantage.

Plants Under Glass.

Chrysanthemums.—There should be no delay in propagating the necessary number of plants. The best method is to insert the cuttings singly in small, clean pots, and place them in a slightly heated pit; but if this is not available, they will root quite well in a close, cold frame, although not so quickly. Damping is the greatest trouble in this respect. Keep the stools as hardy as possible, so that the cuttings may be hardy and short-jointed, and avoid long cuttings at all times. It is better practice to propagate the latest varieties now than to allow the cuttings to remain on the old shoots until they become drawn and soft.

The Forcing-House.—In order to keep a full supply of cut flowers during the winter, considerable forethought is necessary with regard to the introduction of the different subjects into heat at the proper time and in sufficient numbers to meet the requirements of the establishment; but it is better practice to commence a few days earlier than to drive this off too late, when hard forcing has to be carried on, with unsatisfactory results. Newly potted shrubs for forcing should be gradually accustomed to heat, and not placed in the forcing-house at once. In this case a temperature of 55° is quite sufficient to start with, providing the start is made early enough.

Humea elegans.—These plants require very careful watering during the winter; a temperature of 50° is quite high enough by night, and the top ventilators should be left open whenever the weather is favourable. Young plants in small pots must not be allowed to become stunted for the want of potting, but a very small shift is all that is necessary for the present. These plants may be given a temperature of 55° after potting.

Freesia refracta alba.—The various batches of these plants must receive attention with regard to support as soon as sufficiently advanced. Keep them growing in a warm greenhouse, and when the pots are well filled with roots, a good supply of weak manure water should be given.

The Flower Garden.

Roses of all kinds should be planted with as little delay as possible after the soil is in a fit state, and if sharp frost sets in, all tender varieties should receive protection.

Lily of the Valley.—Old-established beds of Lily of the Valley will benefit by a top-dressing of fine leaf-soil and thoroughly decayed manure; and if the space between the rows permits, the soil may be lightly pricked up with the point of a digging-fork previous to applying the top-dressing. If new plantations are contemplated, a somewhat shady situation should be selected for them. The ground must be trenched and manured, and if the nature of the soil is too retentive, a quantity of river sand and old lime rubble should be mixed with it.

The Rock Garden.—Plants in frames should be freely ventilated during open weather, the lights only being necessary as a protection from heavy rain or sharp frost, when they should be closed and some covering applied to keep the pots from being

frozen. Any alterations necessary to the rock-work should be pushed forward while the weather is open, so that, when the time for planting arrives, there may be no delay with this important work.

The Kitchen Garden.

Mushrooms.—Continue to collect and prepare manure for new Mushroom-beds. At this season there should be no difficulty in producing Mushrooms within six weeks from the date of spawning the beds; but it is very important that the material is in good condition when the beds are made up. The manure should be placed in a dry situation where plenty of fresh air is available; turn it frequently to avoid sourness, which is the cause of many failures. The house from which supplies are being gathered should be maintained about 55°. The atmosphere may be kept moist by frequently damping the walls and floor of the house.

Potatoes.—Tubers for planting should be selected now and placed singly in shallow trays or boxes; for early plantations in pots and boxes the sets may be placed in gentle heat to sprout, after which the pots should be prepared. Ten-inch pots should be freely crocked, and three parts filled with sandy loam and leaf-soil in equal quantities. The tubers should then be placed in position, three to each pot. A temperature of 50° is quite high enough, and when the young shoots are through the surface, the pots should be raised to within a few inches of the roof glass. As growth advances, ventilation must be freely given.

Early Peas.—In sheltered gardens a sowing of Peas may be made on a warm south border about the end of the year, providing the soil is not too wet. At Frogmore our first sowing was made last year on December 30, and gathering commenced on June 2. From that date an unbroken daily supply was kept up till November 11. The variety for first sowing must be hardy, and for this purpose I find *The Pilot* without an equal. The pods are as large as those of *Gradus*, and the quality of the produce is all that can be desired.

Royal Gardens, Windsor.

JOHN DUNN.

FOR NORTHERN GARDENS.

The Kitchen Garden.

Salads.—Continue to sow Mustard and Cress and Radishes at intervals, the former in boxes, but the latter will do better in a warm frame. Fresh batches of Endive should also be got under cover for blanching purposes, and any plants that may still be in the open ought to be protected with straw. A small sowing of Lettuce should now be made, and as growth will be very slow at this time, the plants must not be unduly forced. Earlier batches growing in frames should have the soil stirred between the plants, and all decayed leaves at once removed.

Celery.—Opportunity should be taken on fine days to lift a quantity of roots for immediate use, as, if the ground becomes frost-bound, it is by no means an easy matter to take up the required number each day. If these are stood in a cool shed among ashes or sand, they will keep perfectly fresh for some time.

The Seed Order.—As every post will now be bringing in the new season's catalogues, it will be wise during the long evenings to study these before making out the order, as even to the most experienced the final making up of the order requires careful study. This difficulty is increased where the order is selected from, say, half a dozen different firms. It is always wise to try some of the novelties, or, at any rate, something that has not been hitherto tried; this always gives an added interest to the season's work. Above all, order early, if for no other reason than out of consideration for the seedsmen.

The Flower Garden.

Nymphæas.—These aquatics, although to a certain extent dormant, should by no means be neglected. Sometimes they are planted in tubs or baskets in artificial ponds with no great depth of water, and much damage is sure to result if this becomes frozen to any extent. In such cases it will be advisable to have the ice broken round the

plants at least once a day, if this is possible, and see that the plants are covered by at least a foot of water.

Rheums.—There is perhaps no more striking plant in the bog or wild garden than the various forms of the Ornamental Rhubarb, which associate so well with Gunneras and many other hardy plants. Where planting is intended, this should be completed as soon as possible. The plants grow quite freely in almost any kind of soil, and, once planted, they may be left to take care of themselves.

Trenching in the Flower Garden.—If not already done, the ground to be occupied by Dahlias and Sweet Peas should be deeply dug or trenched without delay. For the latter, our method is to throw out a trench about three feet wide and about the same depth, and let it remain open until the beginning of March, when it can be made up with soil and manure previous to planting. In trenching for Dahlias, a liberal supply of manure should be added to the soil.

Plants Under Glass.

Dracænas.—The older plants that have become somewhat unsightly through the loss of the lower leaves may have the tops taken off; these can be rooted in a bottle containing water and small pieces of charcoal. As soon as roots are emitted, the tops should be potted up and placed for a short period in a propagating-case until they are established. To increase the stock, the stems should be cut into small pieces, and these placed in boxes or pans filled with leaf-mould and sand, where they will root readily.

Amaryllis.—A few of the earliest-ripened bulbs should now be brought from their resting quarters and top-dressed prior to being placed in a moderate temperature. In top-dressing, remove the surface soil, taking care not to damage the roots, and replace this with a mixture of loam, leaf-mould and sand, with the addition of a little dried cow-manure. Very little water will be required for a time; indeed, to overwater them at this stage would cause the bulbs to make growth at the expense of the flower-spikes.

Ferns.—Attention must now be given to the Adiantum section, which will by this time be pretty well devoid of fronds. Those that are decayed should be removed, and if the slightest trace of scale is observed, these fronds should be burnt. Unless the plants are wanted for an early supply, they may still be rested for another month, giving just sufficient water to keep them alive.

The Hardy Fruit Garden.

Trees in Grass.—Where these trees seem to be stunted in growth and otherwise have an unhealthy appearance, it is certain there is something wrong at the roots. In such cases it will be advisable to fork up the grass round the stem of the tree—say, 4 feet all round—and top-dress with a mixture of turfy loam, lime rubble and wood ashes, afterwards applying a light mulch of good farmyard manure.

Planting.—While the weather permits, the planting of all fruit trees must be proceeded with, as any delay might result in the trees being out of the ground for weeks. After being planted, it is of the utmost importance that all trees should be correctly named. This will not only be found of great assistance when gathering the fruits, but also a more intelligent interest will be taken in their cultivation. Opportunity should also be taken to examine the other trees and rename those that require it.

Fruit Under Glass.

Strawberries.—The earliest batch of these will now be commencing to grow, and may be given slight bottom-heat. More than ordinary care must be exercised in applying water to the roots, as, so far as my experience goes, quite as many plants die from an overdose as they do from the other extreme. As a precaution against green fly, it might be as well to fumigate the house, say twice, before the flowers open.

Melons.—A small batch of Melons should now be sown, and as these are essentially sun-loving plants, the greatest care must be exercised in their management in the earlier stages during these sunless days. The seeds should be sown singly in small pots and plunged in a hot-bed, and, as soon as the young plants appear, they must be placed in a position close to the glass, at least during the daytime.

JOHN HIGHGATE.

(Head-gardener to the Marquis of Linlithgow.)
Hopetoun Gardens, South Queensferry, N.B.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor endeavours to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object makes a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowerin shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ERADICATING POLYGONUM POLYSTACHYUM (R. H. W.).—The troublesomeness of several species of this genus is due to the fact that they are capable of giving a new plant, not only from every scrap of root, but in course of time from every node of every root; hence their aggressiveness and the difficulty of getting rid of a well-entrenched enemy. In the circumstances, we can only advise you to do what we have more than once been compelled to do with that equally bad pest, Gout-weed, viz., first dig out the whole of the soil of the affected area to a depth of 2½ feet or more, and either treat the bottom with weed killer at double strength or insert a 6-inch-thick layer of gas-lime, leaving the hole open meanwhile and covering the lime with a thin layer of soil to retain the obnoxious fumes. This has the effect of poisoning the soil below and killing any roots which remain. If convenient, discard the excavated soil and substitute it with fresh. If not, spread it out so thinly that it can be overhauled and every vestige of root seen. The former would be the simplest, and probably the least costly too. As the plant has also invaded the path, it might be necessary to treat this on similar lines, otherwise you will be continually confronted by an enemy at front and rear and both flanks as well. In exceptional cases such as this, only the most drastic measures are likely to save the situation. Our sympathies are with you; we know the plant.

ROSE GARDEN.

PRUNING ROSES FIRST SEASON AFTER PLANTING (A. G. S.).—You can retain the Ponzance Briars almost their full length, merely removing the extreme ends of the shoots in March. In subsequent years cut one or more of the oldest growths to the ground each spring. Ramblers of the wichuriana section, such as Dorothy Perkins, need not be pruned the first year, but they would be all the better in subsequent years if cut back to within 6 inches or 8 inches of the soil. Ramblers of the multiflora section, such as Crimson Rambler, cut back to about twelve inches in March. Climbing Teas and Hybrid Teas, prune back to 2 feet in March. Dwarf Teas and Hybrid Teas, prune at the end of March or early April to within 4 inches or 5 inches of the ground, excepting strong growers such as J. B. Clark and George Dickson. These should be retained about twelve inches to fifteen inches long. You need not prune the Honeysuckle or Clematis montana. C. Jackmannii should be cut back to within a foot of the ground each year, unless you wish it to attain a lofty height, in which case do not prune, but you will have no bloom low down. Rose Conrad F. Meyer, prune back to about three feet. In subsequent years retain young growths 4 feet to 5 feet long, and cut out old wood freely close to the ground.

THE GREENHOUSE.

TREATMENT OF PANDANUS VEITCHII (W. H.).—This Pandanus does not require any special treatment

during the winter months, provided a suitable temperature is maintained. We are inclined to think that your trouble is caused by the plants being kept too cold. You say they are kept in a temperature of about 65°. If that is the day temperature, the night may well be 10° lower, and that would be too cold. A minimum night temperature of 60° to 65° is necessary to keep this Pandanus in good condition. If the thermometer is allowed to drop too low during the night, this, combined with an excess of atmospheric moisture, would cause the damage complained of. The soil must, of course, be kept in a regular state of moisture.

FRUIT GARDEN.

FRUIT SPRAYER (E. K. B.).—We think that for general purposes in a small garden a knapsack sprayer with a pump is the most useful, the one you mention being serviceable, but several others advertised in our columns are also good. The best winter wash for cleansing fruit trees is made by dissolving 2lb. of caustic soda in ten gallons of water, but this will not cure Apple scab, and Peach scale is better attacked by a wash containing paraffin. To deal with Apple scab, take care to prune out all the cracked or dead shoots and spurs during the winter, then spray with Bordeaux mixture just before the buds burst, and again just after the petals have fallen.

APPLES ROTTING (F. A. C.).—The Apples appear to have become over-ripe and to have been over-charged with water when they were picked. In seasons when a dry spell is followed by rain, the latter often happens. No fungus or insect pest is, so far as we can see, associated with the trouble.

APPLE FOR INSPECTION (F. B.).—The Apple is apparently attacked by the fungus of brown rot, Sclerotinia fructigena. If it persists in the trees during the winter it will probably kill many of the flowers, and it would therefore be well to spray the trees with Bordeaux mixture just before the buds open in spring. Remove and burn all mummy fruits from the trees.

MISCELLANEOUS.

CATERPILLAR FOR NAMING (Q. W.).—The creature sent is the caterpillar of the swift moth. It attacks and feeds on the roots of various plants, especially fleshy ones like those of the Peony. A soil fumigant might drive it away, but the best preventive is to catch the moths as they flit over the beds in June at dusk. Birds devour the grubs readily when they are turned out in digging, and many are killed through the attack of a fungus.

MOSS ON LAWN (A. W.).—The best treatment for your lawn after raking the moss out will be to give it a good dressing of fine soil at once. This should be raked about well wherever the soil is dry enough, in order that it does not become beaten down. Do not rake it until the grass is really vigorous in spring. A dressing of basic slag and kainit can be applied about the beginning of February at the rate of 3lb. of the former and 1lb. of the latter to the rod. A really good dressing of soil is often efficacious in destroying moss.

NAME OF FRUIT.—E. K.—Ribston Pippin is correct.

BOOKS.

An American View of Garden Design.*—

America has taken to garden design with characteristic vigour. Many of the universities give special courses in landscape and formal design, and Miss Humphreys' book is the outcome of college studies. She discusses and illustrates every sort of equipment and ornament for the garden, and gives some useful advice which needs to be heeded as much in England as in the States. In her catalogue of garden offences, three stand out pre-eminently—the mixture of styles, the mixture of materials, and the overcrowding of features. She justly pleads with the garden-lover not to set a Greek temple in a Japanese garden, not to mingle solid stone ornaments with perishable rustic work, and, above all, to recognise the limitations of space. A garden should not be a museum of styles culled from every country and century, but an organic unity in which every element is justified by the degree in which it contributes to a harmonious whole. Ignorance in any art is a bad thing, but too much knowledge may be worse if it stifles the reticence of careful choice and if it fails to reject details of design not mutually helpful.

* "The Practical Book of Garden Architecture," by Phoebe Weston Humphreys. Lippincott; price 21s.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

COMPARED with the early December meeting, when the great hall of the society at Vincent Square was redolent of fruit and flowers of the finest description, this, the last fortnightly show of the year, held on the 15th inst., was thin indeed, though little below the normal at this season. The outstanding feature was the fine bank of Euphorbias (Poinsettias) from Edmonton, which, in scarlet and rose colours, was most effective. Quite excellent, too, was the well-grown, well-staged lot of Carnations from Hayward's Heath, while winter-flowering Heaths of the soft-wooded section were in more than one direction a great charm. Brilliant masses of Azaleas demonstrated the responsiveness of these flowers to forcing, while Orchids were well displayed by several leading firms. Novelties were not numerous, the floral committee granting awards of merit to three, and the Orchid and the fruit and vegetable committees to one each.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), Sir Harry J. Veitch, and Messrs. J. O'Brien, Gurney Wilson, W. Bolton, R. A. Rolfe, J. Wilson Potter, F. J. Hanbury, A. McBean, Walter Cobb, J. Charlesworth, J. Cypher, W. H. Hatcher, W. P. Bound, J. E. Shill, C. H. Curtis, A. Dye, W. H. White, S. W. Flory and Stuart H. Low.

Messrs. James Cypher and Sons, Exotic Nurseries, Cheltenham, exhibited a superb lot of Cypripediums, the perfect condition of which—freshness, vigour, handsome, well-developed flowers and the like—evidenced ideal surroundings and high cultural excellence not always seen. On the present occasion the choice assortment, which gained a silver Flora medal, contained excellent examples of lecanum Gratrixæ, l. clinkaberryana, the chaste white-flowered Boltonii, Priam (whose handsome coloured dorsal sepal always appeals), Euryades splendens (with rose-coloured dorsal sepal and handsomely developed pouch), Queen Alexandra (which appeals by way of size and fine pink dorsal sepal), together with such indispensable as Thalia, Sanderæ (the queen of the yellow insignes), Harefield Hall (bold and telling) and the beautiful and distinct Actæus Milky Way. These were of outstanding merit.

Messrs. Stuart Low and Co., Enfield, had very beautiful examples of Cattleya Fabia, C. labiata reedleyensis (white, with orange throat), C. l. alba, C. moira rubescens (a very charming bit of colour), the all-white Brasso-Cattleya Queen Alexandra (with heavily fringed lip), B.-C. Maronæ (of a pleasing pink shade), Cypripedium insigne Sanderæ, C. callo-rothschildianum, Oncidium varicosum and Vandas cærulea and sanderiana. Silver Banksian medal.

Messrs. Flory and Black, Langley, had some fine Odontoglossum crispum varieties and the very beautiful Lælio-Cattleya Barbarossa variety (pink sepals and crimson lip) and L.-C. Bola variety (with pinky white sepals and crimson lip), both very charming and quite distinct.

From Baron Bruno Schröder, The Dell, Englefield Green, came a lovely example of Cypripedium Moonbeam (a sturdy-looking plant, with yellow pouch and petals and white, green-shaded dorsal sepal). A freely flowered specimen was shown. Odontoglossum crispum Leonard Perfect was handsome and well grown, and merited the cultural commendation awarded.

Mr. Walter Cobb, Horsham, showed a well-flowered example of Odontoglossum periclitum Cobb's variety, which is very heavily blotched with dark chocolate.

Mr. J. T. Bennett-Poë, Cheshunt, had the very beautiful pink-flowered Brasso-Cattleya Mme. C. Masson, in every way a handsome and distinct hybrid.

Messrs. Sander and Sons, St. Albans, received a silver Flora medal for a beautiful and interesting lot, the more conspicuous being Lælio-Cattleya Bertha Fournier (of rich ruby red tone), L.-C. Phoenix (with greenish sepals and handsome, dark-coloured lip), Brasso-Cattleya Wotan (pink), Odontoglossum cirrhosa ardentissimum (whose pinky ground colour is copiously barred with chocolate), the very dark-coloured, if small-flowered, Odontodia devoniana, the yellow-flowered Lycaste Youngii and Zygopetalum Mackayii.

Messrs. Charlesworth and Co., Hayward's Heath, Sussex, were awarded a silver Flora medal for a group containing many choice things, none, however, of greater outstanding merit than the richly coloured, gracefully arching spikes of Calanthe Veitchii or the handsome, pure white of Miltonia bleuana. Both, too, were in force, and showed well. In addition there were some fine Odontoglossums, notably O. armainvillieriensis xanthotes (with a great arching raceme of pure white flowers) and O. eximium (handsome in size and heavily blotched withal), Lælio-Cattleya Bella alba (white sepals and petals, with crimson purple lip), L.-C. Cornelia (with yellowish sepals, whose crimson lip is also heavily veined), Lælia gouldiana (reddish), the old, though useful, Odontoglossum grande, and the miniature chaste white-flowered Masdevallia tovarensis, with a variety of Cypripediums, were also noted in the group.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), Messrs. E. A. Bowles, J. Green, B. Crisp, R. C. Notcutt, W. J. Bean, G. Reuthe, R. Hooper Pearson, J. Hudson, C. R. Fielder, J. W. Moorman, J. Jennings, W. Howe, C. Dixon, T. Stevenson, J. Dickson, F. W. Harvey, J. T. Bennett-Poë, W. P. Thomson, E. H. Jenkins and G. Paul.

Messrs. H. B. May and Sons, Edmonton, arranged a floor group of well-grown Poinsettias, the examples of 2½ feet high or thereabouts terminated by well-coloured

heads of bracts, making a brilliant display. The arrangement took the form of three semi-circular groups, two of the brilliant *P. pulcherrima*, with a central one of the new *P. p. rosea*, a charming addition to the group. Intervening spaces were occupied by groups of *Erica nivea*, *E. autumnalis*, *E. hyemalis*, *E. h. alba* and others, and while contrasting well with the main feature of the exhibit, also afforded good variety. Begonias of the Gloire de Lorraine set, with Ferns of sorts, constituted a good margin, some beautifully grown specimens of *Areca lutescens* occupying the background. A handsome seasonal group. Silver Flora medal.

Messrs. Wills and Segar, Onslow Crescent, South Kensington, displayed a table of greenhouse flowering plants, of which the soft-wooded Heaths were among the more important. Of these, *E. melanthera*, *E. hyemalis* and *E. nivea* were all in well-flowered bushes and very beautiful at this season of the year. Begonia Gloire de Lorraine and some delightful bushes of Azaleas as full of flower as in May and in one or two varieties also added charm to the group. Orange trees in fruit were also good. Silver Flora medal.

Mr. Clarence Elliott, Stevenage, had a pretty variety of alpines, chiefly of Saxifrages and Sedums, together with flowers of Gentiana and many miniature-growing shrubs suited to rock gardening. Among these, *Camphorosma monspeliensis* was most interesting.

Messrs. Allwood Brothers, Hayward's Heath, had a most delightful gathering of Perpetual-flowering Carnations—certainly one of the most charming and varied staged by this firm during the present season. Among the more beautiful and distinct were Fairmount (heliotrope), Gorgeous (cerise), Mandarin (fancy), Mary Allwood (one of the most shapely of winter-flowering sorts), Peerless (a fine cerise), Mrs. C. F. Raphael, Wivelsfield White (very pure and beautiful), Rosette (deep cerise) and Triumph (deep crimson). Silver Banksian medal.

Mr. G. Reuthe, Keston, set up a variety of hardy plants, chiefly alpines not in flower, though winter-flowering Crocuses were very beautiful. Of these, *C. marathonsius*, *C. laevigatus* (purple and mauve) and *C. hyemalis* were very fine. Iris *Histrio*, white and red *Lapagerias* (cut from the open), Snowdrops and a charming lot of *Erica mediterranea hybrida* were all good.

Messrs. Wells and Co., Limited, Merstham, set up vases of Chrysanthemums, Carnations and the pink-flowered Snapdragon *Nelrose*, the latter very pretty at this season. Of the Carnations, Pink Sensation, Champion (scarlet), Red Benora and Aviator (scarlet) were very good. Chrysanthemum Richmond, rich yellow (see "New and Rare Plants"), was also in this group. Bronze Flora medal.

Messrs. Stuart Low and Co., Enfield, in addition to winter-flowering Begonias, as Optima, Exquisite, Elatior and others, showed Cyclamen in variety and a goodly grouping of *Acacia platyptera*, the latter with globular bosses of flowers. In another direction Messrs. Low staged Carnations of excellent quality, of which Premier (yellow), Triumph (crimson), Satin Robe, Salmon Enchantress, Mrs. Mackay Edgar (fine pink), Mrs. C. F. Raphael (very large), Mary Allwood and Gorgeous (cerise) were the more imposing. The group was most tastefully arranged. Silver Banksian medal.

The Misses Hopkins, Shepperton, showed made-up boxes of alpines similar to those exhibited at the last meeting. They were rather interesting. Gentians, Campanulas, Saxifrages and Sedums were all included.

Messrs. W. Cutbush and Son, Highgate, N., displayed a table group of *Erica hyemalis alba*, *Daphne indica rubra*, Cyclamen in variety, *Erica autumnalis*, Begonia Gloire de Lorraine, together with retarded Lilies and other plants. Silver Banksian medal.

Messrs. J. Piper and Sons, Bayswater, displayed a large table of Azaleas in variety, together with soft-wooded Heaths, handsome Palms, Crotons and Ferns. The exhibit was of an extensive as well as an attractive nature. Silver Flora medal.

Mr. L. R. Russell, Richmond, had a large circular group of Begonia Gloire de Lorraine and its sports, the whole of the plants in well-flowered examples. In another direction Mr. Russell exhibited a big group of chiefly berry-bearing shrubs, as *Skimmia*, *Pernettya mucronata* in variety, *Aucuba vera*, *Arbutus Unedo*, *Crataegus (Pyracantha) angustifolia* (with orange-coloured fruits), *Garrya elliptica* and its variety *femina*, with *Euonymuses*, *Ivies* and other things. Silver Flora medal.

FRUIT AND VEGETABLE COMMITTEE.

Present: A. H. Pearson, Esq. (chairman), and Messrs. J. Cheal, W. J. Jeffries, W. Bates, Edwin Beckett, A. R. Allan, H. Markham, H. J. Wright, E. A. Bunyard, A. Bullock, Owen Thomas, John Harrison, W. Poupert, J. Willard, James Gibson, George Kelf and P. D. Tuckett.

The exhibits before this committee were exceedingly limited, and consisted of dishes of fruits entered for award. The only variety attaining to this honour was Winter Ribston, from Messrs. G. Bunyard and Co., Maidstone. In appearance it favours a small Blenheim, with the brisk flavour of the Ribston. Apple Joffre-French, a highly built, conically inclined, golden-skinned fruit, and Apple Lord Kitchener, having somewhat of the form and size of a Bramley's Seedling, came from Mr. W. Palmer, Andover, Hants. Neither, however, appealed from the attractive point of view, or, judged by results, from the usually applied tests at the table. A tray of fruits of Wellington, showing the spotting to which this excellent late-cooking kind is prone, was also on view. The source whence it came was not displayed.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE executive committee of this society held a meeting on Monday, the 14th inst., at Carr's Restaurant, Mr.

Thomas Bevan presiding. The secretary presented the financial statement, which seemed to give general approval, for it was passed unanimously. All items of expenditure will be paid up to the end of the year out of current receipts, and consequently there will be no necessity, as was anticipated, of falling back on the reserve fund. The accounts and report for 1914 will be printed for circulation at the annual meeting, which will be held at Carr's Restaurant, Strand, on February 1 next at 7 p.m.

It was resolved that the usual shows be held in 1915, at the Crystal Palace if possible; but if not there, it is hoped that the society will be able to make other arrangements. This cannot be decided until it is known how the Crystal Palace may be affected by war requirements. The following are the dates for the meetings of the executive committee next season, viz., September 20, October 18, November 15 and December 13, 1915, and January 17, 1916. The floral committee will meet in 1915 on the dates following: September 20, October 4, 18 and 25, November 3, 15 and 29, and December 8.

On January 13 the floral committee's dinner will be held at the Old Burton Tavern, Cheapside. An invitation is cordially extended to members of the other committees and their friends. Mr. D. B. Crane, as chairman of the floral committee, pointed out that they had had eight meetings, at which no fewer than 103 novelties had been submitted. He felt they would all agree that they had thus helped to keep alive the interest in the Chrysanthemum during a period of exceptional difficulty. Much care had been exercised in making the awards, for to-day a much higher standard of excellence in all sections is demanded. The registration fees amounted to £5 3s., an important addition to the funds of the society.

After an interesting and lively informal discussion concerning singles, disbudded and in spray form, the meeting closed.

CROYDON AND DISTRICT HORTICULTURAL SOCIETY.

"THE Wonders of a Green Leaf" was the title of an illustrated lecture given by Mr. C. H. Curtis before the members of the Croydon and District Horticultural Mutual Improvement Society at their last meeting, held at the Surrey Hotel, George Street. It was as an old friend that Mr. Curtis was received by his audience, for he has met this society on more than one occasion, and his genial manner wins for him the highest esteem from all members of the gardening profession. The casual observer looks upon the green leaf in an uninterested manner. It simply comes within his range of vision, and it has appeared year after year, and will continue to do so as long as the world lasts. But when we stop to consider and search into the important functions they possess for the well-being of mankind, it is then we find the wonderful part the leaves play in the economy of Nature. Among their many uses the principal is as a source of food to man and beast, and the lecturer aptly described their position as standing between living beings and starvation. In other ways they are useful to us, especially in their chemical constituents. The healing medicine concocted from the herbs, or the deadly poison distilled from the leaves, each has its uses for man. Leaves afford shelter for man, beast and bird; they emit a sweet fragrance, and they inhale the carbonic acid gas given off by animals, retaining the carbon for their own nutrition and allowing the oxygen to escape purified. Then, again, how much do they add to the beauty of our landscapes. Remove them and we have a desolate tract. A leaf of a plant illustrates the great forces of energy contained between its cuticles, and energy without noise. Walk through a field of Cabbages composed entirely of leaves, and one can imagine the vast energies displayed in raising itself from the small seed to the matured plant. In Nature's adaptability it has not forgotten the environment of its subjects. For instance, in most of our trees the leaves have a flat surface spread out to catch the sun's rays, an all-powerful element for the well-being of the plant. Leaves are placed one above the other to serve as a means of distributing moisture. It may be noted also that while some leaves turn outwards from the plant, as the Horse Chestnut, there are others which turn towards the main stem, such as the Rhubarb and the Beet. Plants of this class are not branching, and require their moisture nearer to the stem. In arid, dry atmospheres leaves of plants are thicker, like the Cactus. These have their special construction to enable them to conserve moisture for longer periods. The classification of trees is deciduous (trees which cast off their leaves annually) and evergreens. In each illustration on the screen the lecturer showed a picture composed entirely of leaves or leafy plants, pleasing to the sight and restful to the mind. In concluding his discourse, he spoke of the wonders of a green leaf in supplying—in Ruskin's words—"trees for the builder's yard, flowers for the bride's chamber, corn for the granary, moss for the grave."

The audience tendered heartiest thanks to Mr. Curtis for such an excellent lecture. Several exhibits of flowers were staged by Messrs. W. Coles, J. Dingwall, R. Oatley and G. Scrivens, and added interest to the evening.

VALE OF LEVEN AND DUMBARTON HORTICULTURAL ASSOCIATION.

THE PROPAGATION OF PLANTS.

AT the usual monthly meeting of this society, held at the Public Hall, Alexandria, on December 9, Mr. A. Hosking, Horticultural Organiser of the West of Scotland Agricultural College, delivered a most instructive and interesting lecture on "The Propagation of Plants by Seeds, Cuttings, Layers, Budding and Grafting." In the course of his address he said that the propagation of plants was an interesting phase of gardening. In dealing with the

importance of a propagating-house, his remarks were very much enhanced by the diagram which was thrown on the screen, while he also illustrated the principles of a sound and well-built greenhouse. In dealing with seed propagation, Mr. Hosking pointed out the vast difference of seed propagation by Nature and that undergone with the skilled hands of the gardener. In the first instance the seed was, when ripe, blown round and about the original plant and propagated. Instead of having, as before, one plant, a great many had appeared. Such self-sowing plants were a nuisance in some respects as when they are left alone they make the border present an unsightly appearance. The gardener has overcome this nuisance by being able to harvest his seed, thus planting or propagating at his own will. Another item which should not be overlooked is to take care not to overcrowd the seedlings that have been planted in pots or boxes. Overcrowding is detrimental to the plant's growth. Dealing with cuttings, he pointed out the best method to adopt, and with customary care there should be few failures. For instance, with the Honeysuckle, like many more plants, it is advisable to take a half-ripened shoot and strike it in July or August. He next demonstrated the importance of placing a bell-glass over some of the harder-struck cuttings. With *Ericas* this was a good plan to adopt, but care must be exercised in wiping the interior of the bell-glass every day, as a vast amount of moisture collects quickly on the glass. The propagation of leaves was next spoken of, and *Malaxis paludosa* seems to be easily propagated in this way. Severing the leaf from the old plant and planting it in a damp situation, it will in time form itself into a fine plant. Gloxinias can be propagated in a similar manner if the veinwork is cut. Stonecrops, too, if taken with a bud attached to the base of the leaf, will give satisfaction. The layering of Rhododendrons, Carnations, &c., occupied some time to explain. Here mention was made of the importance of serpentine and aerial layering. Budding he termed a mysterious undertaking. He followed these remarks with a splendid and interesting account of splice, saddle, rind and cleft grafting. A brief but interesting inlet into the propagation of corms, tubers, runners or stolons concluded the lecture, which was much appreciated by the audience, and was illustrated with a comprehensive series of lantern slides. Councillor James Parlane, who occupied the chair, expressed the feelings of the audience in according Mr. Hosking a very hearty vote of thanks for his able and valuable lecture.

Mr. James McKenzie, Tullichewan, exhibited a most meritorious group of Chrysanthemums. The group consisted of the pure white form of Purity, Sylvia Slade (rose garnet), the single and beautiful rich pink form of Edith Pagram and the exquisitely blended Market Red. At the close the chairman was accorded a vote of thanks.

At the meeting on January 13 next Mr. Robert Dickson of Messrs. Austin and McAslan, Glasgow, will take for his subject "Some Sources of Nature's Plant Food."

TRADE NOTES.

TREES AND SHRUBS FOR PRESENT PLANTING.

WE are reminded that the present is an excellent time for planting nearly all kinds of trees and shrubs by the receipt of a particularly interesting catalogue from Messrs. Pennell and Sons, the old-established and well-known nursery firm of Lincoln, with branches at Grimsby, Doncaster, Gainsborough and Brigg. This catalogue is replete with information about all kinds of hardy trees and shrubs, including fruit trees, the numerous illustrations being particularly good and most useful as a guide to amateurs. In addition to the best standard varieties of the respective kinds, Messrs. Pennell list a great many of the newest and choicest varieties and species. We advise all our readers who are interested to write to the firm for a free copy of this catalogue.

ROOTS FOR FORCING.

Now that many kinds of vegetable and flower roots are being taken into the forcing-house, we would draw the attention of our readers to the interesting catalogue of such roots published by Messrs. Mann and Sons, Twickenham. This contains particulars and prices of practically all kinds of roots suitable for forcing, a business of which the firm has made a speciality for many years. Gardeners who are short of stock will find in its pages just the material and information they need. To the amateur who wishes to force a few kinds, the excellent practical hints will prove of the greatest value. Messrs. Mann will be pleased to send a copy of this catalogue to anyone who cares to write for it.

PUBLICATIONS RECEIVED.

"The Garden Under Glass," by W. F. Rowles; price 6s. net. Grant Richards, Limited, London.
 "Productive Orcharding," by Fred C. Sears, M.S.; price 6s. net. J. B. Lippincott and Co., Philadelphia and London.
 "A Textbook of Grasses," by A. S. Hitchcock; price 6s. 6d. net. Macmillan and Co., Limited, London and New York.
 "Adventures Among Wild Flowers," by John Trevena; price 7s. 6d. net. Edward Arnold, London.
 "Live Stock Journal Almanack," price 1s. Messrs. Vinton and Co., Limited, 8, Bream's Buildings, Chancery Lane, London, E.C.

* * * The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d.; Foreign, 8s. 9d.

